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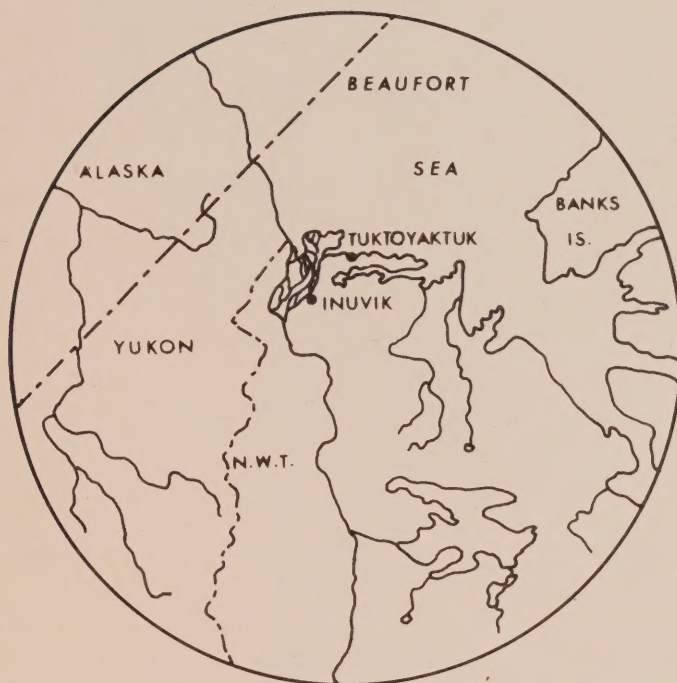
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TUKTOYAKTUK - CAPE PARRY [AREA ECONOMIC SURVEY]



G. ABRAHAMSON

INDUSTRIAL DIVISION

NORTHERN ADMINISTRATION BRANCH

DEPARTMENT OF INDIAN AFFAIRS & NORTHERN DEVELOPMENT

TUKTOYAKTUK -- CAPE PARRY

an area economic survey

1962

A.E.S.R. #62/2

by

G. Abrahamson

The views, conclusions and recommendations expressed herein are those of the contributors and not necessarily those of the Department of Indian Affairs and Northern Development.

Industrial Division,
Department of Indian
Affairs and Northern
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Ottawa, June 1968

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PREFACE

This report is one of a series of Area Economic Surveys carried out by the Industrial Division of the Department of Indian Affairs and Northern Development.

These surveys are a continuing part of the Department's efforts to determine the basic for local economic and social progress in the Northwest Territories. Basically the surveys are intended to:

- 1) Assess the renewable resources as to their ability to sustain the local population.
- 2) Determine the degree of exploitation of these resources and the efficiency of their use.
- 3) Investigate and explain the social and economic factors affecting resource utilization.
- 4) Recommend ways and means whereby the standard of living of the local people might be improved.

As the reasons for these surveys are practical, the material presented in the reports is selected for its relevance in this respect; much academic material gathered in the course of the investigation which may have been taken into account in the deliberations is necessarily excluded from these reports. On the other hand, authors have been given wide latitude in their approach and have been encouraged to give consideration to key problems of a theoretical nature and to include such theoretical argument where its inclusion is thought to contribute to the understanding of the material presented and of the practical conclusions drawn.

The reports are published primarily for use within the Department, for distribution to other interested government agencies and for limited distribution to libraries, universities and organizations and individuals actively engaged in northern research, administration or development.

The following reports in this series have been published to date or are in preparation:

A.E.S.R.	Title	Author
58/1	Ungava Bay	J. Evans
60/1	The Squatters of White-horse	J. Lotz
62/1	Southampton Island	D. Brack
62/2	Tuktoyaktuk-Cape Parry	G. Abrahamson
62/2	Western Ungava	R. Currie
63/1	The Copper Eskimos	G. Abrahamson
63/2	Keewatin Mainland	D. Brack and D. McIntosh
63/3	Yukon Territory Littoral	R. Currie
65/1	Banks Island	P. Usher
65/2	Northern Foxe Basin	G. Anders
66/1	The Mackenzie Delta	D. Bissett
66/2	Rae-Lac La Martre	G. Anders
66/3	Frobisher Bay	S. MacBain (Miss)
66/4	East Coast-Baffin Island	G. Anders, Ed.
67/1	Lancaster Sound	D. Bissett
67/2	South Coast — Baffin Island	G. Higgins
67/3	South Shore-Great Slave Lake	D. Radojicic
67/4	Central Mackenzie	D. Villiers (Miss)



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INTRODUCTION

The past decade has seen most of the Eskimo population drift away from camps scattered along the Arctic coast to concentrate the year round in settlements founded by the white man. There are those who say that this is a bad thing, that the Eskimo will lose his traditional independence. However, others have rightly said that the Eskimos' old way of life was already doomed by the demand for fur and the consequent establishment of trading posts which resulted in the Eskimos becoming dependent on the white man's food and clothing.

Today the Eskimos are taking advantage of rights other Canadians have enjoyed for many years. These are freedom from starvation, and the right to medical care and schooling. Many are finding the security in wage employment that was lacking in fox trapping.

The problem inherent in large settlements is that the immediate surrounding country cannot sustain the demands of a large population, and the areas resources are consequently soon over-exploited.

This study will examine ways and means to achieve a viable economy which, at the same time, will enable the Eskimo people to take full advantage of the educational, social and medical facilities that are now available to them.

The boundaries of the area under survey were as follows:

The eastern boundary — 123rd meridian,

The western boundary— the east branch of the Mackenzie River,

The southern boundary— 69th degree of latitude, and the northern boundary was the Beaufort Sea and the Amundsen Gulf.

Tuktoyaktuk and Cape Parry are the principal settlements covered by the survey. Inuvik and the Reindeer Depot are generally excluded but reference will occasionally be made to them in so far as they affect the economy of the region as a whole.

This report is divided into two main sections. The first deals with a geographic and demographic setting, and the second outlines the economy with specific recommendations for its improvement. The field work was carried out during the four summer months of 1962, and reports were completed in Ottawa in January 1963.

This work could not have been done without the help of the following:

Mr. Peter Usher, Survey Assistant Geographer, McGill University;

Mr. Sam Arey, Captain of the schooner "Nanook";

Mr. John Norberg, Pilot of the schooner "Nanook";

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Rev. Father Lemeur, O.M.I., Tuktoyaktuk;

Rev. Father Dehurtevant, O.M.I., Cape Parry;

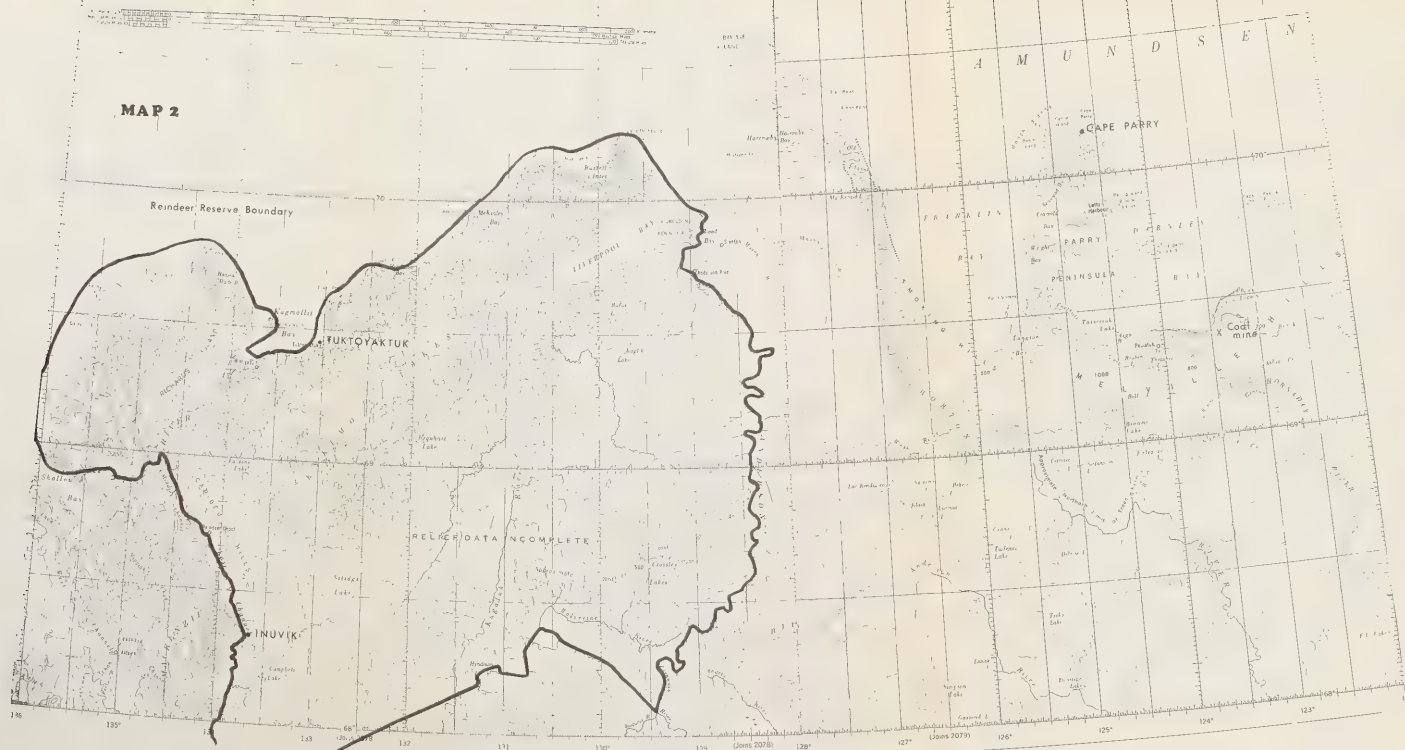
Mr. J. Stevenson, Manager, H.B.Co., Cape Parry.

Thanks is due to members of the staff of the Fisheries Research Board (Arctic Unit) Montreal, and to members of the staff of the Forest Management Section, Department of Forestry, Ottawa.

For criticism of the manuscript the author is particularly indebted to Mr. Jon Evans, of the Industrial Division, Department of Northern Affairs and National Resources.

The author wishes to thank Northern Co-ordination and Research Centre for bearing the cost of reproducing this report, and for arranging for its distribution to universities, organizations and individuals actively interested in northern development.

MAP 2



PART I

**GEOGRAPHIC AND DEMOGRAPHIC
SETTING**

Chapter 1

PHYSICAL GEOGRAPHY

Topography

The topography of the region varies from the very flat, lake covered, terrain of the Tuktoyaktuk Peninsula and the low lands south-east of Eskimo Lakes to the hilly area on the west coast of Franklin Bay, where the Smoking Hills form a prominent coastline, and south of Parry Peninsula, where the Smoking Hills are continued in a series of rounded hills called the Melville Mountains. Both the Smoking Hills and the Melville Mountains are more seaward edges of the interior plateau rather than mountains.

The Parry Peninsula is low with many lakes, but at its northern tip the limestone bed-rock is exposed to form steep cliffs. These cliffs have been eroded by sea action into arches, caves, inlets and islands.

The interior plateau, an extension of the great Interior Plains, presents a uniform surface deeply incised by river valleys.

The coastline from Richards Island to Cape Bathurst is extremely complex, the result of the gradual sinking of this heavily lake strewn, almost level area. The entire shore-line shelves gradually so that it has no more than two or three fathoms depth at a mile from shore. Harbours between Richards Island and Cape Bathurst are infrequent, and, with the exception of Tuktoyaktuk and Bailie Island, are limited to vessels of shallow draft. Shore-line erosion, and sedimentation of the silt carried to sea by the Mackenzie River is continuously making the seas more shallow.

The coastline of Franklin and Darnley Bays is much more pronounced and generally falls off sharply into deep water. The eastern shore of Darnley Bay is formed by the western edge of the Precambrian Shield.

The three principal rivers draining the region are, from west to east, the Anderson, the Horton and the Hornaday.

The Anderson River is approximately 428 miles long. Vessels drawing three to four feet of water can sail as far as Husky Bend but passage is barred by shallows which limit navigation to canoes and scows. During the early part of summer, when water is high, the River is navigable for 100 miles above Husky Bend by boats drawing six to 12 inches of water.

Over its last 200 miles the River flows between steep banks 300 to 600 feet high at a current of two to three miles per hour. The Anderson River valley is wooded to within 30 miles of the coast.

The Horton River is 330 miles long from its mouth to its source at Horton Lake. Its mouth is half a mile wide, very shallow and full of sand-bars. Small boats may be worked up stream from the mouth of the River for a distance of 40 to 50 miles, but navigation is complicated by innumerable sand-bars stretched across the River.

Like the Anderson, the Horton flows through a forested valley several hundred feet deep. Trees grow in this valley to about 50 miles from the coast.

The Hornaday River is about 172 miles long, but entirely unnavigable. In its first 30 miles from the coast, sand and gravel bars are common, channels branch and reunite to form a braided network. The upper end of this stretch is made impassible by the 60 foot high La Ronciere Falls.

The Hornaday's delta is a 20 square mile maze of shallow channels, much of which is submerged at high tide.

Climate

Climatologically, the region lies within the sub-Arctic lowland and summer temperatures compare to those of Churchill, Great Whale River and Fort Chimo.

During recent years climatic data have been recorded at the radar stations of the DEW Line system, but since this covers a relatively short period the data from the records of the weather stations at Aklavik and Coppermine are presented in Tables No. 1 and 2.

Tides and Currents

The tidal range in the Beaufort Sea and the Amundsen Gulf varies from one foot to a maximum of about three feet. In most of this area the normal tidal movement is so small that the influence of the prevailing meteorological conditions at the time may be the greatest factor in determining the level of the water. For example, water levels may drop one foot with easterly winds, or raise four feet with strong westerly winds.

Along the coastal area of the Beaufort Sea currents are generally weak, and are dependent almost entirely on prevailing winds. The prevailing current in the Amundsen Gulf is an easterly setting surface current moving along the coast of the mainland.

Ice Conditions

Highly variable conditions govern the break-up and distribution of sea ice in summer. Winds are probably the most important single factor governing the distribution of ice after break-up. The navigation period from Tuktoyaktuk to Cape Bathurst and Cape Parry for sea going boat traffic rarely commences before the middle of July. In some years, navigation may be held up until the middle of August. In most years, a boat leaving Tuktoyaktuk the first week in August could probably count upon reaching Cape Parry without much delay due to ice conditions.

Because of the earlier break-up of rivers and creeks many of the bays may be ice free before navigation is possible between Tuktoyaktuk and Cape Parry. In an average year break-up occurs as follows:

Tuktoyaktuk Harbour	—	June 18 — 28
Liverpool Bay	—	July 10
Stanton	—	July 1
Cape Parry	—	July 17 — 23
Letty Harbour	—	July 1 — 15
Paulatuk	—	July 1 — 15

At Baillie Islands ice conditions are highly variable, the Islands may be clear of ice by the first week of July one year and ice-bound in August the following year. Heavy pan ice frequently remains in the general area during the whole navigation season. The navigation season for coastal boats ends in late September. Ice may begin to form along the coast from the middle of September onward, by early October it may be several inches thick near shore.

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TABLE 1
Climatological Table for Aklavik

Month	Daily Mean	Air Temperature at Station Level				Mean Relative Humidity	Precipitation				No. of Days with Fog (vis. 1 km.)	Wind Directions								Percentage Frequencies, means of 24 hourly, observations daily.
		Mean of daily		Absolute extremes			Mean total all forms	Max. fall in 24 hours	Mean Snowfall (9h. in snow)	N		NE	E	SE	S	SW	W	NW	Calm	
		Max.	Min.	Highest recorded	Lowest recorded															
Jan.	-18	-10	-26	44	-56	0.6	0.60	6	1	16	1	4	11	22	3	4	23	16		
Feb.	-17	-9	-24	49	-62	0.5	0.39	5	0	18	1	5	15	19	3	4	21	14		
Mar.	-9	0	-18	45	-50	89	0.4	0.33	4	0	23	1	5	18	17	1	4	25	6	
Apr.	9	19	-2	56	-44	89	0.5	0.54	5	*	30	2	4	11	15	2	5	27	4	
May	31	39	22	77	-14	82	0.5	0.42	3	1	29	10	6	8	10	1	3	30	3	
June	49	58	39	85	20	76	0.8	1.17	2	0	28	12	6	11	8	2	1	28	4	
July	56	66	47	93	30	77	1.4	1.61	0	*	26	11	8	9	10	3	3	24	6	
Aug.	50	59	42	88	25	85	1.4	0.79	1	*	17	7	4	13	21	3	3	26	6	
Sept.	38	44	32	72	12	87	0.9	0.47	3	1	24	6	6	14	14	2	2	25	7	
Oct.	20	25	16	55	-22	96	0.8	0.59	8	2	11	4	5	19	21	2	4	22	12	
Nov.	-3	3	-9	44	-50		0.8	0.50	8	1	11	1	5	15	20	2	2	22	22	
Dec.	-17	-10	-24	46	-54		0.5	0.50	5	*	8	1	2	15	17	3	1	18	35	
Mean	16	24	8							20	5	5	13	16	2	3	25	11		
Extreme or Total				93	-62		9.1	1.61	50	8										
No. of Yrs. Obsns.	25	25	25	25	25	10	25	10	25	10	7	7	7	7	7	7	7	7	7	

An asterik (*) indicates an average occurrence of less than 0.5, but greater than 0.

Source: PILOT OF ARCTIC CANADA, Volume 111, 1961

TABLE 2
Climatological Table for Coppermine

Month	Air Temperature at Station Level		Mean Relative Humidity	Precipitation			No. of Days with		Percentage Frequencies, means of 24 hourly, observations daily											
	Mean of daily			Mean total all forms	Max. fall in 24 hours	Mean Snowfall (in. in snow)	Fog (vis. 1 km.)													
	Max.	Min.						Highest recorded	Lowest recorded											
Daily Mean	-19	-11	-26	21	-54		0.6	0.90	6	*		7	3	5	2	12	27	22	7	15
Jan.	-20	-13	-28	34	-58		0.4	0.20	4	1		7	2	2	1	11	28	26	8	15
Feb.	-14	-6	-22	29	-45		0.7	0.87	7	1		8	5	5	2	7	24	21	6	22
Mar.	1	10	-8	46	-42		0.6	0.35	5	2		7	6	10	3	5	18	20	9	22
Apr.	22	29	15	63	-24		0.5	0.71	5	3		14	12	19	3	3	12	11	11	15
May	39	45	32	82	5	89	0.9	2.50	1	3		13	18	22	4	4	7	6	12	14
June	49	57	42	87	31	85	1.4	1.35	*	2		16	18	18	3	4	9	10	13	9
July	47	53	40	80	27	86	1.7	1.37	*	2		16	12	17	6	6	14	10	13	6
Aug.	36	41	31	72	7	90	1.2	0.72	4	2		14	9	13	6	9	15	13	17	4
Sept.	19	25	14	57	-28	94	1.2	1.30	10	1		9	4	9	10	14	22	15	11	6
Oct.	-4	3	-12	36	-42		0.8	0.33	8	1		11	3	8	4	9	26	25	8	6
Nov.	-16	-9	-23	31	-49		0.5	1.01	5	1		7	3	4	2	5	28	27	8	16
Dec.																				
Mean.	12	19	5									11	8	11	4	7	19	17	10	13
Extreme or Total				87	-58		10.5	2.50	57	19										
No. of Yrs. Obsns.	30	30	30	30	30	9	30	9	30	10		13	13	13	13	13	13	13	13	13

An asterisk (*) indicates an average occurrence of less than 0.5, but greater than 0.

Source: PILOT OF ARCTIC CANADA, Volume 111, 1961

Chapter II

HISTORICAL BACKGROUND

In 1826 Dr. John Richardson parted from Captain John Franklin at Point Separation on the Mackenzie River and sailed eastwards to explore the coast between the Mackenzie River and the Coppermine. As his party travelled close to shore and landed nightly to make camp, many contacts were made with the Eskimos who were camped along the length of the coast. At this time four major settlements existed and the population has been estimated as follows: at Kittigazuit, 1000, and 500 each at the villages of Atkinson Point and Cape Bathurst. In the summer of 1857, Roderick Ross MacFarlane explored the Anderson River on behalf of the Hudson's Bay Company, and established Fort Anderson in 1861 for trade with the 600 Indians and Eskimos living in the valley. The Indians lived on the upper Anderson River and the Eskimos inhabited the valley down stream from the "Forks", the confluence of the Anderson and Carnwath Rivers.

After five years of unprofitable operation the Hudson's Bay Company abandoned Fort Anderson.

Between 1890 and 1910 a large number of whalers operated in the Beaufort Sea and the Amundsen Gulf. Many of these wintered in the Arctic for two or three years and their influence upon the Eskimos in the western Arctic was disruptive. Diseases to which the Eskimos had little or no resistance were introduced and spread. A series of epidemics wiped out more than half the region's population. In 1920 no more than 20 people in the region could claim descent from the 2,000 Eskimos who lived there in 1850. (Jenness, 1955)

In addition to spreading disease, the whalers upset the economy of the Eskimos by destroying their self-sufficiency and encouraging a trapping economy. Not only did the wintering whalers employ Eskimos as hunters of fresh meat, but they also urged the Eskimo to trap the white fox in exchange for the white man's goods: Thus the Eskimo's dependence on the white man was established.

Early trading routes maintained by the Eskimos extended from Cape Bathurst to Coronation Gulf. In 1843 the people of Langton Bay, who did not know the use of nets, and who had for some years suffered from a scarcity of food, moved to new areas. (Stefansson, 1951) Some went east and others west, the people who went east never returned and thus the continuous chain of habitation that once stretched eastward along the coast remained broken until the building of the Distant Early Warning line in the 1950's.

Abandoned Settlements

Stanton

Stanton is located on the east shore of Wood Bay some ten miles from the mouth of the Anderson River. The site was chosen in part because of good fishing, and a supply of driftwood nearby. Harbour facilities, however, are lacking. White men operated a trading post in the vicinity from 1920 to 1923.

The Roman Catholic church opened a trading mission in 1937 and continued to operate it, somewhat unprofitably, until 1954.

The five Eskimo families who lived at or near Stanton during this period drifted away to settle at Tuktoyaktuk. By 1955, no Eskimos lived at Stanton or camped in the valley of the Anderson River.

In 1962, Stanton consisted of a two storey mission house in good condition, a warehouse and three native built log houses all in adequate condition. The mission house is dangerously close to the high water mark and it appears that during westerly storms, when the water may rise as much as three feet, waves lap at the foundations of this building.

Schooner Landing

Schooner Landing also known as Anderson River, is located on the east side of the Anderson River close to its mouth. In the 1930's white trappers had camps close-by. In 1946 a building was put up to house the white supervisor of the reindeer herds then in the area. In recent years the building has been used as headquarters from April to September by an ornithologist of the Canadian Wildlife Service.

Maitland Point

Maitland Point is 24 miles north-east of Stanton. The R.C.M. Police had a detachment here from 1935 until 1938. In 1939 the Hudson's Bay Company temporarily moved its Baillie Island – Cape Bathurst post into the vacated R.C.M.P. buildings at Maitland Point.

Lack of harbour facilities made this post difficult to supply, and it was shut down within a year.

Wave action has since eroded the base of the cliff on which the post was situated, causing a landslide which destroyed the buildings.

Baillie Islands and Cape Bathurst

In 1826 Richardson found a population of 500 people on Cape Bathurst and Baillie Islands. In 1911 Stefansson estimated the population to be reduced to about 240 Eskimos. By 1938 there were only 60 to 70 people living in the vicinity and from 1950 to 1960 there were periods when no one lived at Cape Bathurst either in summer or winter. The Baillie Islands anchorage is deep, and offers a shelter from winds blowing in any direction. In 1916 the Hudson's Bay Company opened a post on the Cape Bathurst sandspit but moved it to Maitland Point in 1939 when its buildings were threatened by destruction through the erosion of the sandspit. An R.C.M. Police post at Cape Bathurst was established in 1923 and moved to Maitland Point in 1935.

The closing of these establishments resulted in a further population decline of the area. In 1962 two frame shacks were the only dwellings on Cape Bathurst. These were occupied in winter by a hunting and trapping family who spent the summer months in Tuktoyaktuk.

Horton River

A radar station has been built 3 miles north of an old Eskimo village at the north-west side of the Horton River delta. White trappers have lived at the mouth of the Horton River and operated a small trading post. This post competed with the Hudson's Bay Company post at Baillie Island. In 1935, the H.B.C. bought the white trappers out, and shortly afterwards closed their trading post.

The small harbour at the mouth of the Horton River has since silted up.

Letty Harbour

Letty Harbour is situated on the east coast of the Cape Parry Peninsula. The Roman Catholic church opened a mission at Letty Harbour in 1928, and maintained it until 1936 when the discovery of coal near Paulatuk impelled the mission to move and close down its establishment at Letty Harbour. In 1930 the Hudson's Bay Company established an outpost at Letty Harbour but as there was insufficient trade it was closed down in 1937.

The trading function of the Hudson's Bay Company was then taken over by the Roman Catholic mission at Paulatuk. In 1954, however, when the Paulatuk mission folded, the Hudson's Bay Company, at the request of the Government, re-opened its Letty Harbour outpost. In 1959 it once again closed, but a new trading post opened at Cape Parry the same year.

In 1962 the buildings at Letty Harbour consisted of the standard frame construction H.B.C. store and residence. Both buildings were in good repair, and one was being used as a camping place by Cape Parry trappers. The remaining buildings consisted of three uninsulated lumber shacks.

Paulatuk

A good supply of coal and an excellent harbour were in part the *raison d'être* of Paulatuk. From 1936 to 1954 a Roman Catholic mission operated a small trading post at Paulatuk and thus served as a religious, social and economic centre. This trading mission, as the one at Stanton, was not run on commercial lines, and was closed after operating at a loss for several years.

Once again a population shift took place. The Paulatuk people moved back to Letty Harbour and eventually to Cape Parry.

In 1962 occasional hunters stopped at Paulatuk, and the mission's frost cellar was being used to store seal taken in spring. The buildings, a two-storey residence, trading post, and a fifty foot by sixteen foot lumber cabin, were all in good condition.

Pearce Point

Pearce Point has one of the finest harbours along the Arctic coast and is the last good anchorage between Cape Parry and Bernard Harbour 200 miles to the east.

The Hudson's Bay Company established an outpost at Pearce Point in 1929, but closed it in 1933. In 1930 the R.C.M.P. opened a detachment next to the Hudson's Bay Company and closed it in 1935.

Fishing in the area is poor. Among the Eskimos Pearce Point has the reputation of being a "Hungry Place". In the second and third decades of this century white trappers have stayed at Pearce Point for periods of up to a year or so.

A radar station has been put up near the former settlement.

With the exception of Cape Bathurst, and those sites that now have radar stations, all the settlements discussed in the foregoing section have been abandoned by the Eskimos. Generally speaking any Eskimos living at the radar sites are DEW Line employees.

Present Day Settlements

Tuktoyaktuk

Tuktoyaktuk is the biggest settlement in the region covered by this report. Originally named Port Brabant, the first permanent settlement was not made until 1934, when as the result of a survey of the Mackenzie Bay region, the Hudson's Bay Company selected the harbour as the most suitable point for trans-shipping goods brought down the Mackenzie on barges to deeper draft coastal vessels for distribution along the Arctic coast.

The abandonment of Herschel Island by the Hudson's Bay Company in 1938, and the moving of its transportation centre to the new settlement. More families moved in from Baillie Islands and Cape Bathurst, and the closing of the Stanton mission in 1954 Tuktoyaktuk and the Cape Parry Peninsula.

Tuktoyaktuk has grown considerably since. In addition to the Hudson's Bay Company post, Anglican, Roman Catholic, and Evangelical missions have established themselves. A day school was opened in 1947, an R.C.M.P. detachment in 1950, a nursing station in 1956, and the first resident N.S.O. was appointed in 1957.

Ferguson (1961) in his study of the Tuktoyaktuk community noted that until 1954, and the beginning of the Dew Line, only a small part of the area's population lived in Tuktoyaktuk permanently. At that time a number of families were scattered along the coast and came to Tuktoyaktuk only to trade. In the summer of 1962, only one of the 63 indigenous families camped in Tuktoyaktuk had their permanent home any distance away from the settlement.

Cape Parry

Cape Parry, the only other Eskimo settlement in the region discussed, is approximately 200 miles north-east of Tuktoyaktuk. Cape Parry's history is a recent one, and the existence of the settlement is probably dependent on the DEW Line system which maintains a site at Cape Parry.

In the past thirty years, the Parry Peninsula Eskimos have constantly moved their camps up and down the Peninsula. They were attracted to Letty Harbour when the Roman Catholic mission opened there in 1928, in 1936 they moved with the mission to Paulatuk, in 1954 when the mission closed and the Hudson's Bay Company re-opened the Letty Harbour outpost, the Eskimos returned, and stayed until 1959 when the Hudson's Bay Company closed its Letty Harbour operation to establish a post at Cape Parry. In 1962 all but two of the Parry Peninsula families lived close to the Hudson's Bay post which also caters to some of the 200 whites at the DEW Line site.

The People

A population shift in the 1890's from the Mackenzie Delta to Herschel Island, and an influx of Eskimos from Alaska, was brought about by the whalers employment of Eskimos as hunters of fresh meat.

The expansion of the fur trade, after the decline of commercial whaling, induced some of the Eskimos to move from Herschel to Baillie Islands, and settlements of two or three families established themselves further eastwards as far as Pearce Point.

During the 1920's a number of white trappers moved into the region to trap in the valley of the Anderson River, and along the shores of Franklin and Darnley Bays.

A great deal of inbreeding resulted from this contact of white whalers and trappers with the Eskimos, and it is probable that no full-blooded Eskimo is left in the region today. (D. Jenness, 1955)

Further immigration took place in the 1940's when the Government brought Eskimos from Victoria Island to tend the reindeer herds of the Mackenzie Delta. Over the years other eastern Eskimos wandered in from Coppermine and Clinton Point to settle at the head of Darnley Bay. The diverse origin of the population is illustrated in table 3.

TABLE 3
Eskimo Population by Place of Birth 1962

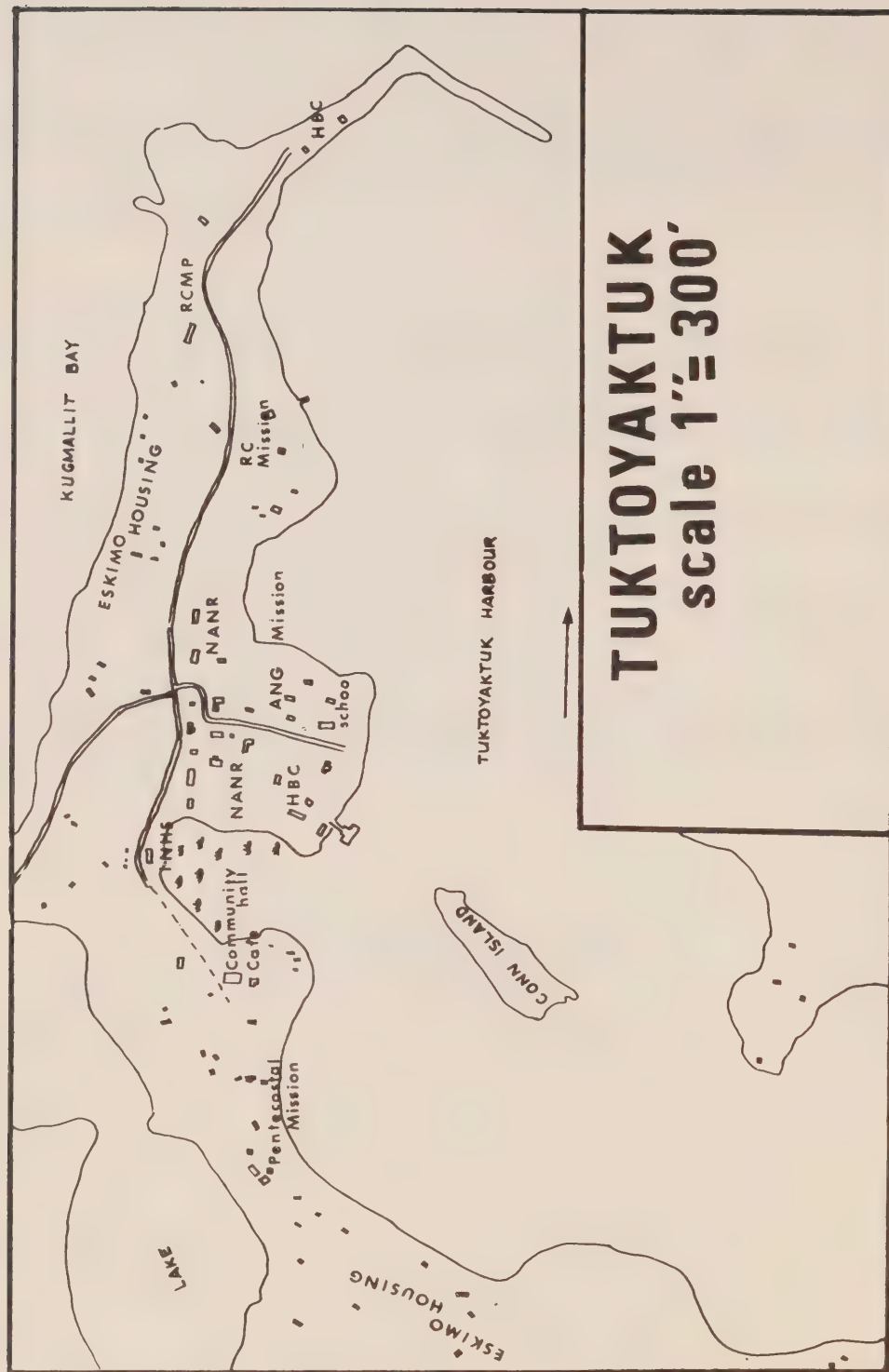
Place of Birth	Tuktoyaktuk			Cape Parry		
	Over age 16	under 16	Total	over 16	under 16	Total
Tuktoyaktuk and Peninsula	44	139	183	—	—	—
*Mackenzie Delta	42	52	94	5	6	11
Banks Island	13	9	22	—	—	—
Stanton	6	13	19	—	—	—
Baillie Island	29	6	35	—	—	—
Parry Peninsula including Pautaluk	6	0	6	19	34	53
Coppermine — Victoria Island	19	5	24	15	2	17
Herschel Island	4	4	8	—	—	—
Alaska	6	0	6	1	0	1
Other	5	3	8	—	—	—
	174	231	405	40	42	82

*Includes persons born in hospitals at Aklavik or Inuvik.

Before the advent of the white man the Eskimos were hunters rather than trappers, and their seasonal movements were governed by the presence of seals at the floe edge, the run of fish on the rivers, and abundance of caribou in the hinterland.

This changed when the demand for fur and the consequent establishment of trading posts resulted in the Eskimos becoming trappers rather than hunters, and made them dependent on store bought food and clothing.

Fox have always been the principal fur of the region and income from them has varied with the fox population, and the demand of the world market.



MAP 3

Chapter III

THE POPULATION OF TUKTOYAKTUK

In 1962 the population referred to in this report was made up of the indigenous residents of Tuktoyaktuk, the Tuktoyaktuk Eskimos living at DEW Line sites, the reindeer operators at Toker Point, and the Eskimos of the Parry Peninsula.

For the purpose of this discussion the population of the Parry Peninsula will be treated separately.

Population Structure

Table 4 indicates comparative rates of birth, death, infant mortality and natural increase for Tuktoyaktuk, for Canadian Eskimos as a whole, and for the Canadian population generally.

The following facts stand out:

- a) The Tuktoyaktuk birth rate is one of the highest in the world exceeding the all Eskimo rate by 1.6 % and the all Canada rate by 5.8%.
- b) The Tuktoyaktuk death rate is almost three times the national rate.
- c) The Tuktoyaktuk infant mortality rate although less than half the Eskimo rate, is more than three times the national figure.
- d) The Tuktoyaktuk rate of natural increase is almost four times the national rate.

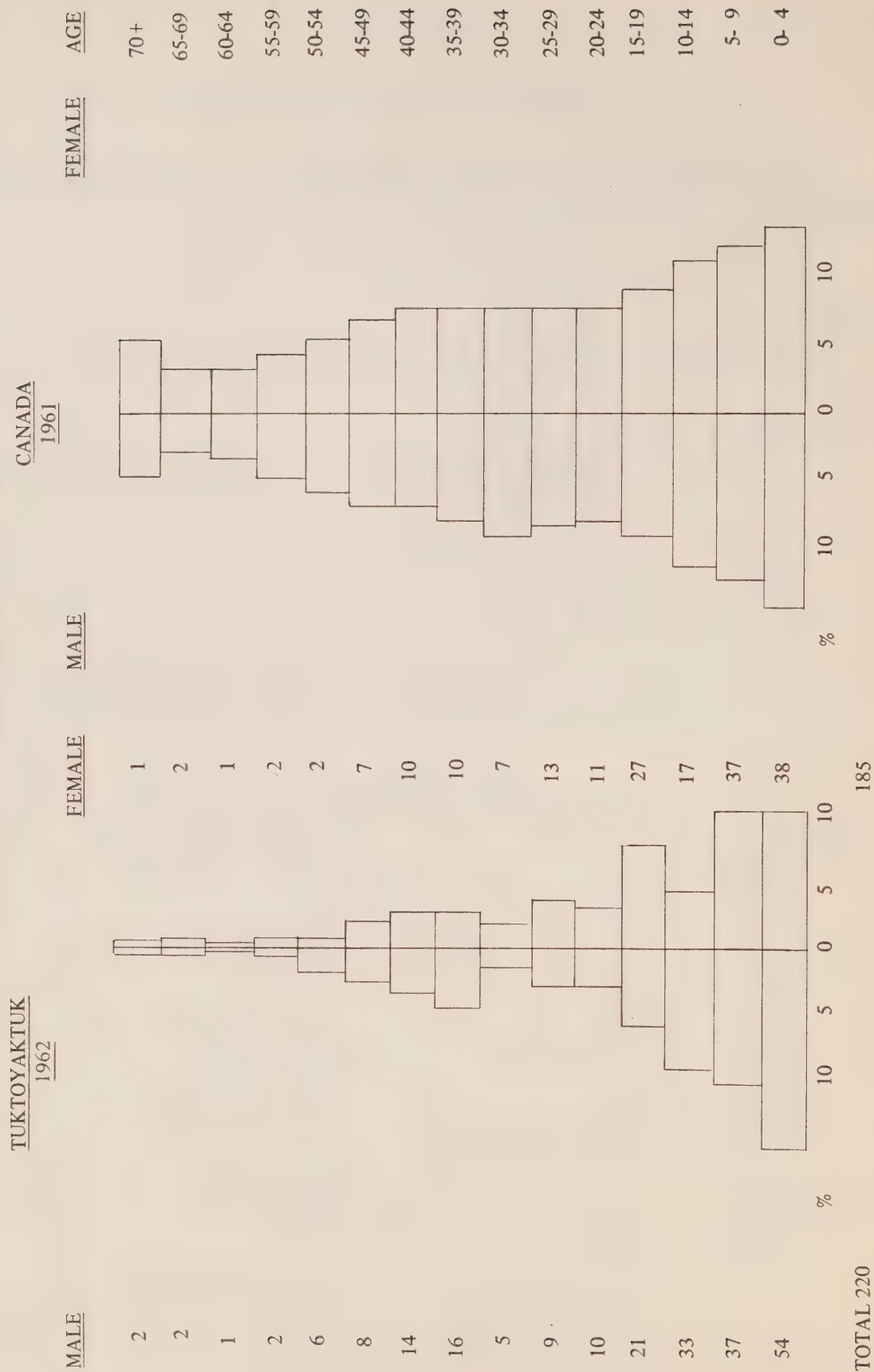
Because of the high proportion of the population under 15 years of age, the declining death rate, and the tradition of large families, the sharp population increase can be expected to continue in the future.

TABLE 4
Tuktoyaktuk Mortality Rates

<u>Birth Rate</u>		<u>Per 1000 Population</u>
Tuktoyaktuk	1961	85.0
Can. Eskimo	1961	59.0
All Canada	1961	26.9
<u>Death Rate</u>		<u>Per 1000 Population</u>
Tuktoyaktuk	1961	21.0
Can. Eskimo	1961	21.0
All Canada	1961	7.8
<u>Infant Mortality</u>		<u>Per 1000 Live Births</u>
Tuktoyaktuk	1961	88.2
Can. Eskimo	1961	193.0
All Canada	1960	27.0
<u>Natural Increase</u>		<u>Per 1000 Population</u>
Tuktoyaktuk	1961	77.0
All Canada	1955	20.2

Figure 1 shows the percentage distribution of the Tuktoyaktuk population by age and sex, and for comparison, Canada as whole. It is of interest to note that while more than half the Tuktoyaktuk population is under the age of 15, the all Canada rate for this group is 33%.

FIGURE 1
Percentage Distribution of the Population by Age and Sex



The permanent population of Tuktoyaktuk and its satellite camps during July 1962 was made up of 405 Eskimos, Indians, Metis and 32 whites. The whites, Government employees, missionaries and traders, resident in Tuktoyaktuk, break-down into these groups:

- 1 Area Administrator, wife and one child¹,
- 1 Fur Garment Industry Instructor and wife,
- 1 Maintenance Mechanic and wife
- 1 School principal, wife, and three children
- 3 Single teachers
- 2 Single nurses
- 1 R.C.M.P. Corporal, wife, and 2 children
- 2 Single R.C.M.P. Constables
- 1 Hudson's Bay Co. Manager, wife, and 3 children
- 1 Single Hudson's Bay clerk
- 1 Roman Catholic Priest
- 1 Anglican Deaconess
- 1 Pentecostal missionary and wife
- 1 Transportation Company caretaker
- 1 Free trader, wife and 2 children
- 1 White trapper and his metis son

In addition, there are some 20 single white men and two families who man the auxiliary DEW Line site of Bar 3 two miles from the village. Other than stimulating the demand for local handicrafts these men have little direct impact on the economy of the village.

The 405 natives are made up of 60 Eskimo families, two Metis families of white status, and one Indian family. Not all the Eskimo families live in Tuktoyaktuk, the bread winners of three groups totalling 17 are employed on various DEW Line sites, three other families, totalling 20, are reindeer herders who spend most of the year with their animals, and one family or ten winters at Cape Bathurst.

Migration

The population of Tuktoyaktuk is fairly mobile. Over the past 20 years the people of the surrounding country have concentrated in the settlement, yet during more recent years there has also been considerable emigration. Twelve families moved to Banks Island, one family to Frobisher Bay, two to Reindeer Station, one to Aklavik and several more to Inuvik. Immigration of families is probably exceeded in numbers by the constant to and fro movement of single people, visiting friends or seeking work in Inuvik or along the DEW Line.

Churches

Three religious groups are active in Tuktoyaktuk and are represented by the Roman Catholic priest, an ordained Anglican Eskimo minister, and a white Anglican deaconess, the white preacher of the Pentecostal sect known as the Glad Tidings Missionary Society. Adherence to these churches, though by no means static, breaks down as follows:

TABLE 5
Distribution of Tuktoyaktuk Families by Church Membership

	Number of Families	Number of Individuals	Percentage Individuals
Anglican	34 (5)*	201	50%
Roman Catholic	25 (6)	145	35%
Pentecostal	10 (2)	59	15%
		405	100%

* Bracketed numerals () refer to number of mixed families.

¹ An assistant area administrator was appointed in late 1962.

Since the Pentecostal church does not demand an exclusive membership there is a degree of overlap, formal members of the Anglican church attending Pentecostal services.

Six families were of mixed religious affiliation, in these cases the family is generally Anglican and his wife and children are Roman Catholic, in some instances there are Catholic girls in what otherwise are Anglican families.

Church membership does not follow any clear cut ethnic lines. It appears that the families who came from Stanton, the Roman Catholic mission post, are all Roman Catholic, and that the Eskimos who emigrated from Alaska or the Coppermine region, and who have at some time or other been connected with the reindeer industry, generally belong to the Pentecostal sect.

Education

The majority of the native people in Tuktoyaktuk are all able to speak English. Although the first school did not open until 1947, schooling facilities were provided in the area by the Roman Catholic and Anglican missions as early as 1929. The two missions in Aklavik provided board and schooling for those of their adherents who wished it, and continued this service until the opening of Federal day school hostels in Inuvik in 1959.

Admission to the Inuvik hostels is now restricted to children above grade six or to children whose parents stay out on the trap line during winter.

Of the total population, 122 are now at school, and 84 have had schooling of some sort in the past. Table 6 indicates present and past school attendance and levels reached.

TABLE 6
Schooling – September 1962

<u>Grade</u>	<u>Presently Attending</u>	<u>No longer Attending</u>
12	—	1
11	—	1
10	—	—
9	6	3
8	6	2
7	7	12
6	14	7
5	13	11
4	13	14
3	8	15
2	19	14
1	34	5
Opportunity class	<u>2</u>	<u>—</u>
	122	84

1 other pupil was taking a vocational training course in Yellowknife.

An Anglican mission school was opened in 1947 and taken over by the Department of Northern Affairs a year later.¹ Grades one to eight were taught in the school and grade nine was taken by correspondence. The school remained a one teacher establishment until 1956. During this period the teacher doubled as nurse and was the Department of Northern Affairs' sole representative. In 1956, a

¹ The first school to be operated by the Department of Northern Affairs.

second teacher was appointed, followed by a third in 1957. In 1959 the teaching staff was increased to four and has remained at that level since.

The physical lay-out of the present school consists of four separate '512' buildings, each in charge of a teacher. Usually more than one grade is taught in a class room, and frequently different levels are taught within a grade.

A new five room school and auditorium is planned for 1965.

Unlike other northern communities, there has been no great turn-over of teaching staff. The first teacher stayed for eight years and of the four teachers on staff in September 1962 one had just been appointed, and the others had served six, three, and one year respectively.

The teachers enjoy the respect of the community, and although school attendance is not compulsory all children of school age attend.

The school curriculum is based on that of the Province of Alberta. Only half the children pass from grade one to grade six in six years, the remainder spend two or more years in the same grade. In this connection, it must be pointed out that the children are handicapped by the language barrier, and parental indifference to schooling. Some children have no change of clothing and at times miss school if their clothes are wet or in the laundry. Another factor is inadequate house accommodation, poker playing and other entertainment will prevent children from getting their proper sleep.

From October to May the Department of Northern Affairs provides two services which may possibly encourage school attendance. The first is a taxi, consisting of a chartered dog team, designed to bring children to school from outlying cabins. Second, and more important, is the provision of school lunches to all children. This lunch consists of reindeer broth or stew consistency, bread and milk. In some cases this may be the only regular meal a child receives, although now, when many family heads are employed on construction projects, regular meals are becoming the rule rather than the exception.

Vocational Education and Training

Between March 1957 and June 1958 three months' training courses were held in Leduc, Alberta, to teach men the operation and maintenance of heavy equipment with a view to qualifying them for jobs on the DEW Line.

In 1962 there were ten men in Tuktoyaktuk who had received this training. Four of these were still employed on the DEW Line, and two others had just quit but were planning to go back.

Six boys have had or were taking the vocational education and training course offered at the Sir John Franklin highschool in Yellowknife. Of these six, one had completed the full year mechanics course and had subsequently found employment on the DEW Line. The other five had had one to three years of training in carpentry or mechanics but left or were expelled before completion of the course.

Though this record might indicate a lack of perseverance on the part of these boys, in fairness to them it should be pointed out that the trainee can see little advantage in being separated from his family for long periods if, at the end of his training, neither Government nor private employers will offer him an opportunity to demonstrate the skills he has learned.

Business must show a profit, and Government construction projects must meet deadlines, but the Government must give a lead by employing Eskimos on skilled jobs, and might give a subsidy to private employers of trained Eskimo labour where the degree of skill is less than that expected from a skilled white.

A total of three girls went to Yellowknife for further training. Two left before completing their courses but the third passed grade 12 and in 1962 was in her third year of nurses' training in a Winnipeg hospital.

One man holds a Master's Ticket for coastal vessels and two men have had full training in boat building. One of these is considered to be a fully qualified boat builder, and has in fact, built some excellent cruisers and dinghies. While working at the Inuvik boat shop he gave instruction on boat building to pupils of the Federal Day School. Because he found living expenses too high in Inuvik, this man has returned to Tuktoyaktuk. In the summer of 1962 he was employed as a carpenter on building projects.

No general adult education classes are presently being given in the community. A program to bridge the educational gap which exists between parents and their children would be of great value. Classes might also be held to teach adults handling of money, care and maintenance of personal equipment, and general principles of health education.

Such a program is, of course, being planned by the Education Division of the Department of Northern Affairs. This report only reiterates the need for adult education.

Health

Tuktoyaktuk's first Indian and Northern Health Services nurse arrived in 1955. A nursing station was built during 1956, and a four-bed ward was added to it in 1957. Construction started on a modern six-bed nursing station in 1961 and was completed in the summer of 1962 when a second nurse was added to the establishment.

The present nurses who were both appointed in 1962, expressed surprise at the relatively high standard of most of the housing, but though that a system of garbage disposal was the most pressing problem affecting public health. One aspect which strikes the white person is the Eskimos inability to distinguish between serious and minor ailments, a patient with a stomach ache may call a nurse out of bed at three in the morning but fail to report a baby which has been running a high temperature for several days. Teaching the elements of first aid, hygiene, and public health might well be included in any adult education program.

Records show tuberculosis to be on the decline, especially in the lower age groups. Active cases are spotted by annual X-ray surveys and isolated immediately. In the summer of 1962 five persons were being treated in hospitals for pulmonary tuberculosis. Of the total population 10% has at one time been treated for this disease.

Table 7 shows the vital statistics for the past 10 years. Of the seven deaths in Tuktoyaktuk during 1961, three were caused by pneumonia and two by enteritis. Both diseases are common among the Eskimos and are indicative of inadequate housing and poor hygiene.

Seriously ill persons are evacuated by aircraft to the Inuvik General Hospital, 80 miles to the south. This hospital has a working capacity of eighty beds and provides most medical and surgical facilities. Two to three physicians are on its staff, and one of them makes periodic visits to Tuktoyaktuk.

The nurses are primarily concerned with treatment of minor ailments, and preventive medicine through health education. The public health aspect of their work takes them into every home and is of great importance in diagnosing sickness and disease in pre-school children whose symptoms might otherwise go unnoticed.

Table 8 shows the number of homes visited, and the total number of persons treated by the nurse each month.

1. Number of homes visited by the nurse each month.
2. Total number of persons helped in home visits.
3. Number of persons who visited the clinic each month.
4. Persons admitted to bed in the nursing station each month.

TABLE 7
Vital Statistics 1952 – 1961
Tuktoyaktuk Population¹

Year	CAUSE OF DEATH																		
	Tuber- culosis			Pneu- monia			Malnu- trition			Old Age & Unknown			Other			Still Born or Premat.	Total Death	Birth	Increment
	I	C	A	I	C	A	I	C	A	I	C	A	I	C	A				
1952			1	1	1	1						1				1	6	25	+19
1953																	—	22	+22
1954				2						1					1+	1	5	18	+13
1955				4						2					2*		8	22	+14
1956			1	5	1												7	23	+16
1957			1	3	1	1						2	2	2*		1	13	32	+19
1958		2			1						1	1				2	7	28	+21
1959			1										1				2	19	+17
1960				3								3	1			2	9	27	+18
1961				2		1					1	1	1			1	7	31	+24
TOTALS																	64	247	183

I – Infant
C – Child
A – Adult

Cancer
* Alcoholic Poisoning
Enteritis
ⁱ Includes families at Stanton and Cape Bathurst
Old Age

Source: Registrar of Vital Statistics, N.W.T.

TABLE 8
Assistance Given by Nurse

1961/62	1	2	3	4
July	87	114	194	4
August	86	111	119	1
September	58	74	213	1
October	90	122	169	—
November	84	123	191	2
December	71	98	129	2
January	63	97	122	3
February	76	136	173	2
March	92	134	117	4
April	96	158	200	2
May	121	197	180	5
June	130	278	167	—
Total	1045	1642	1974	26

Table 9 indicates the most common ailments treated by the nurse during 1961. The high incidence of gastro-enteritis, diarrhoea, and perhaps, infectious hepatitis emphasises again the need for a supply of safe water and proper sanitary facilities. During 1961 there were mild epidemics of infectious hepatitis and chicken-pox. The most prevalent disease among children is otitis media, a chronic infection of the middle ear.

TABLE 9
Common Ailments Treated

<u>Ailment</u>	<u>Number of Cases</u>
Common cold or influenza	195
Staphylococcus infection	89
Infections of the ear, nose or throat	86
Diarrhoea	49
Infectious hepatitis	24
Conjunctiuitis	24
Pneumonia or bronchitis	22
Arthritis or rheumatism	20
Chicken-pox	16
Gastric flue	9

Law Enforcement

Law and order along the Arctic coast from the Mackenzie River to Cape Young is maintained by one R.C.M.P. corporal and his two constables stationed in Tuktoyaktuk. One constable travels along the DEW Line in Transair aircraft, and patrols are carried out by bombardier.

For the year reviewed all prosecution of Eskimos in Tuktoyaktuk arose from drinking. Five persons were charged with assault, two were charged with making home-brew, and sixteen were prosecuted under the N.W.T. Liquor Ordinance for intoxication, or illegal possession of alcohol.

Cases of this kind are generally heard by the school principal in his capacity of Justice of the Peace. Serious cases are tried by the Territorial Court which goes on circuit at least once a year.

Housing in Tuktoyaktuk

The houses of Tuktoyaktuk's white population fall into two categories. The staff attached to the various government agencies live either in "512's" or in prefabricated Units. The missionaries and traders have frame houses, and the one white trapper who moved to Tuktoyaktuk from Pearce Point in the fall of 1961 spent the following winter and summer in a scow. With the exception of the white trapper mentioned, all the whites in the settlement have good housing and use fuel oil to heat their homes.

The three Tuktoyaktuk families employed along the DEW Line live in houses built by the Department of Northern Affairs several years ago. Most of these houses meet the requirements of warmth, sanitation, and adequate space, and will not be discussed further in this report.

The Eskimo housing consists of 39 log houses, 15 frame houses, 5 shacks of scrap materials, and four tents.

The log houses are generally well constructed of large driftwood logs which come down with the spring flood waters of the Mackenzie. The floods of 1961 and 1962 delivered a particularly good supply of building logs to Tuktoyaktuk. In the summer of 1962 five families took advantage of this boon to build extensions or new houses.

The better frame houses are rented by the Department of Northern Affairs employees, or belong to the R.C. Mission. Several families have built frame houses of excellent quality.

Three of the shacks belong to reindeer herders who use them occasionally. During 1962 one of these shacks was replaced by a log house. The remaining two shacks are occupied by a young man and his family and by a widow with two grown sons.

Tents are occupied by a single individual who expects employment at the DEW Line at any time, by two nomadic families who now and again herd reindeer, and by one family of three adults.

By Arctic standards the community of Tuktoyaktuk would seem well housed. The log and frame houses are structurally sound, and lend themselves to insulation.

Using the criterion of 50 square feet of floor space per person, and excluding the 46 children who live in the Inuvik school hostels for 10 months of the year, all but 27 families have adequate space.

It is interesting to note that of the 27 families whose floor space averages less than 50 square feet per person, three family heads are government employees whose salary averaged \$3,500 for the past year. Thirteen other families in this group had an average annual income of \$2,800 and included two families who belonged to the settlement's highest income group. It would seem that the people of Tuktoyaktuk do not place much importance on housing, and that there is little prestige attached to the better or bigger house. Of the remainder in this group, three families live in houses put up by the Department of Northern Affairs, and include one family on full time relief. Six more families are those mentioned above or were connected with reindeer herding and may be considered nomadic.

During the summer months several individuals, and families move out of their cabins into wall tents put up either close by or on the beach. The two obvious reasons for this might be that the cabins, as a result of condensation and spring run-off, have become too damp for comfort, and that school children returning home from the hostels put a strain on the existing accommodation.

Most houses have porches, and many have stages and storage sheds. All homes have wooden floors, bedsteads of wood or metal, and simple furniture such as kitchen tables and chairs. The bigger homes often have partitions dividing the house into rooms. Few families are without clocks and radios, and the more affluent, most of whom have at one time been employed on DEW Line construction or other wage labour, have sewing machines, guitars, and even tape recorders.

Fuel

Cook stoves constructed from steel drums or factory made are to be found in every home. The fuels used are invariably drift-wood or fuel oil, or a combination of both. As a rule those in steady jobs and some of the social assistance burn oil, and the remainder use drift-wood. During extremely cold weather a number of families use oil burning heaters to supplement their wood stove.

The minimum annual cost of heating an adequately draft proof 16 foot by 28 foot log house, using fuel oil or wood, is as follow:

1350 gallons at 65 cts per gallon ¹	\$877.50
1350 gallons at 41 cts per gallon ²	\$553.50
14 cords of wood at \$40 per cord ³	\$560.00

Canoes are used in summer, and dog teams in winter to gather drift-wood from near by beaches. Two individuals with bombardiers range further afield to collect firewood which they sell at about \$20 a load. During the summer of 1962, the outer beaches and those in the harbour had drift-wood deposits of some magnitude but few people made any efforts to stockpile this. 1961 and 1962 were good years when exceptionally large quantities of wood came down the Mackenzie River. In some years, when exceptionally large quantities of wood came down the Mackenzie River. In some years, when this supply fails, fuel becomes scarce and may be difficult to get.

Since a disproportionate amount of time is devoted to the search for firewood during winter, when men ought to be attending their trap lines, the following proposal may be worth investigating. Using a revolving fund the Department of Northern Affairs might buy and stockpile good quality drift-wood in summer for resale or relief issue during winter. In this way revenue from the sale of drift-wood would be better distributed within the community and the incentive provided might induce people to stockpile firewood in summer for their own use.

¹ 1962 H.B.C. retail price

² Cost after bulk storage tanks are erected

³ Assumes that drift wood is used during June, July, and August.

Chapter IV

TUKTOYAKTUK SETTLEMENT FACILITIES

Water Supply and Sewage Disposal

The preceding chapter would show the population to be richly endowed, living in structurally sound buildings of adequate size, and possessing the resources to heat them.

But satisfactory sanitary facilities cannot be divorced from good housing and no matter how adequate the housing in Tuktoyaktuk may be in other respects, sewage and water services are not supplied to the bulk of the population. The Department of Northern Affairs provides fresh water by tank truck to its employees, and those of other government agencies, and arranges the disposal of their sewage and garbage. During summer the bulk of the population must use a canoe to fetch fresh water from a creek two and a half miles south east of the settlement. During stormy weather this task becomes hazardous and often impossible. In winter, ice is cut from the various lakes close to the settlement and brought in by dog team. During freeze-up and break-up, water or ice is stored in oil drums.

In summer, individuals dump sewage into the sea or into the harbour, and in winter haul it out on to the sea-ice. Garbage, food scraps, and other rubbish surround many of the cabins, but by and large the settlement presents a tidy appearance. A few families have outhouses, some have inside toilets, but the majority have no toilet facilities.

In 1962 the inter-Departmental committee on Federal-Territorial financial relations recommended that, "The Territorial Government undertake responsibility for the operation of a safe water supply and sewage disposal service in established communities, and that the Federal Government would pay 50% of the capital and operating costs to service Indians and Eskimos, or from Federal funds to the extent they are unable to pay."

It would seem then that in the foreseeable future Tuktoyaktuk will receive the services consistent with a progressive program of public health and sanitation.¹

Power and Fuel

In 1962 a new powerhouse-garage was built to replace a temporary unit housing a 25 kw and two 10 kw diesel electric generators. The power generated by these machines became insufficient with the expansion of the Department of Northern Affairs facilities. The new building houses two 50 kw generators, and the old 25 kw generators which is being retained as a standby.

It was planned that the increase in generating capacity would be sufficient to supply the needs of the entire community, including the R.C.M.P., the Missions, and the traders, who had previously all produced their own power. But in late 1962 it became evident that these generators were not adequate enough to service the community.

In line with its policy of supplying fuel oil at economic prices to established communities in the north the Department of Northern Affairs is to build two bulk oil storage tanks of 105,000 and 175,000 gallons capacity. The Department of Northern Affairs will sell fuel in bulk to the Hudson's Bay Company at 25 cents a gallon for eventual retail at 41 cents a gallon.

Although the bulk storage of oil will result in a drop of income to the few men who are hired each year to manhandle 45 gallon oil barrels the community will gain by the reduction in the price of fuel oil from 65 cents to 41 cents a gallon.

¹ In the summer of 1962 construction had started on a standard plan '335' public bath house - Laundry.

Perishable Food Storage

Fresh fish and meat are stored in frost cellars or ice-houses. A dozen people have ice-houses, some of which are mere pits designed to hold fish for dog food. The average ice-house is a ten by ten foot pit dug into the permafrost and connected to the surface by a twelve foot shaft.

Two much larger permafrost cellars were sunk by the Department of Northern Affairs in 1959 and 1961. Both are about 20 feet below the surface, the first, used by the Hudson's Bay Company and the Department of Northern Affairs, consists of two connecting caves of 1446 cubic foot capacity, and a 20 foot gallery leading the three cubicles of 144 cubic foot capacity each.

The second, known as the community ice-house, was finished in 1961. This is a much more ambitious structure. A 23 foot vertical shaft, covered by a small shed leads to two 40 foot long galleries. Eleven 384 cubic foot cubicles, each with a door and lock, are hewn from the permafrost on opposite sides of the galleries. In conjunction with the community ice cellar the Department of Northern Affairs operates a sharp freezer of 1,600 cubic foot usable capacity to fast freeze freshly caught fish prior to their storage underground. In 1962 the freezer was not operative and only small quantities of fresh fish could be taken into the ice cellar at a time.

Stores, Restaurants and Accommodation

The virtual monopoly the H.B.C. enjoyed as Tuktoyaktuk's only trading post was broken in August 1962 when Tuktoyaktuk Traders Ltd. established a trading post in the settlement.

When interviewed, the owners outlined plans to operate a small cafe and, at a later date, a hotel tourist camp with facilities for 10 persons.

With the expansion of Tuktoyaktuk and the increasing influx of tourists and visitors, a hotel will help to relieve the Administrator and his staff of the burden inherent in supplying all visitors with board and bed.

Both the Hudson's Bay Company store and Tuk Traders carry a great variety of goods, and stock fresh foods such as eggs, potatoes, fruit and vegetables. The Hudson's Bay Company sells frozen foods ranging from peas to T-bone steaks.

A 32 foot by 52 foot recreation hall built of logs was completed in late 1962. This was a community project. The men of the village volunteered their labour; land, technical advice, and general supervision was given by the Department of Northern Affairs; the I.O.D.E. donated 55% of the cost of building materials with the balance being paid by the Federal Government.

Equipment for Hire

Chapters VI and VII list in detail the equipment available in the region. In Tuktoyaktuk the Department of Northern Affairs maintains a TDC-5 tractor which may be rented. Heavier equipment such as D-4 and D-8 tractors equipped with blades and winches can be hired from the DEW Line station if prior authorization obtained. Rates for this equipment are shown in the appendix.

Chapter V

THE POPULATION OF THE PARRY PENINSULA

Population Structure

The permanent population of the Cape Parry Peninsula may be divided into two groups: the transient population of single men who man the DEW Line site; and the Eskimo population of Cape Parry located in a village one and a half mile from the DEW Line site and the two Eskimo families at the head of Darnley Bay between the Deltas of the Hornaday and Brock Rivers.

Without the DEW Line site, the Eskimo village of Cape Parry would probably not exist. The locality is poor in food and fuel, neither good fish nor caribou are found within a day's journey by dog team.

The Eskimo population was originally attracted to Cape Parry by the employment opportunities of the DEW Line; The Roman Catholic Mission and the Hudson's Bay Company established posts shortly after.

The DEW Line site provides employment, a ready market for handicrafts and raw fur, medical facilities, transportation and communication, entertainment in the way of dances and theatre shows, and all the resources to be mined from a rich garbage dump.

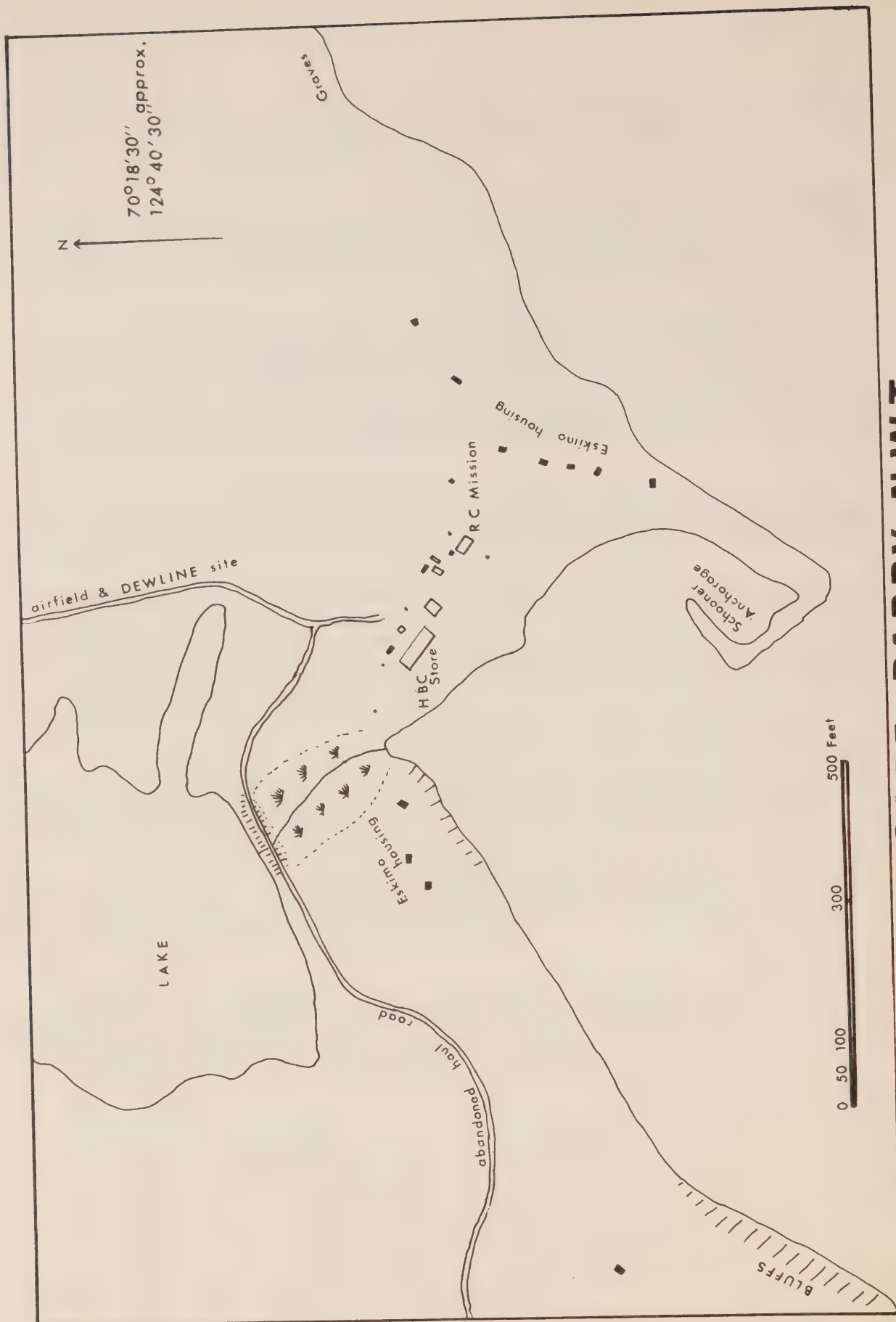
The permanent population of Cape Parry in 1962 consisted of two whites, the R.C. priest and the Hudson's Bay Company post manager. The Eskimo population was made up of 17 families or 82 individuals. Twelve of these families were direct descendants resulting from the marriage between an Alaskan Eskimo woman from the Mackenzie Delta. The five other families are recent immigrants from the Amundsen Gulf and Victoria Island region. There has been no intermarriage between these two groups.

Included in the above permanent population are two Eskimo families employed at the Cape Parry DEW Line site who are closely related to the people of the village.

Distribution of the Cape Parry population by age and sex is shown below. The population is too small for statistical analysis but the remarks concerning Tuktoyaktuk are generally applicable to Cape Parry also.

TABLE 10
Cape Parry Population by Age and Sex

<u>Age Group</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
75 and over	—	1	1
70-74	—	—	—
65-69	1	—	1
60-64	—	—	—
55-59	—	—	—
50-54	1	—	1
45-49	2	—	2
40-44	4	1	5
35-39	—	3	3
30-34	4	1	5
25-29	3	1	4
20-24	3	7	10
15-19	5	6	11
10-14	6	3	9
5- 9	2	2	4
0- 4	<u>16</u>	<u>10</u>	<u>26</u>
Totals	47	35	82



CAPE PARRY, N.W.T.

MAP 4

Migration

During the 1940's official concern was expressed at the danger in inbreeding among the Eskimos of the area who were all closely related. There was very little communication with other settlements, and opportunities for marriage outside the group were limited. The establishment of the DEW Line brought about a rapid change. Single young men began travelling along the DEW Line chain on construction work and they picked wives from Aklavik and Tuktoyaktuk, and men from other locations collected brides from Cape Parry.

Several families moved to other DEW Line sites, and one to Inuvik. During the past 11 years the total number of people in the area, despite immigration from the east, increased by only 15 people.

Churches

The Roman Catholic church is the only one represented in the area, and all families with the exception of three immigrant families are members of it. The church has always played a vital role among the people of the Parry Peninsula. The priest has been in the area for many years and knows the language and the country intimately. The resources of the mission, such as materials and equipment, appeared to be readily available to all the people of the area regardless of their religious persuasion. The priest felt that the influx of families from the east was a good thing as most of these people were active hunters and trappers, and they stimulated competition between the two groups.

Education

With the exception of the older eastern immigrants all the Eskimos of Cape Parry speak English. While the missions operated at Paulatuk and Letty Harbour, the R.C. priests conducted classes in reading. Beyond this, there was no schooling in the area. Boys and girls were sent to the mission residential schools in Aklavik until 1959, when the Federal day school hostels opened in Inuvik. Table 11 shows that 15 children now attend school and the levels reached by the 22 adults who have attended school.

TABLE 11

<u>Grade</u>	<u>At School</u>	<u>No longer at School</u>
12	—	—
11	—	—
10	—	—
9	—	—
8	—	1
7	2	—
6	1	2
5	2	6
4	1	4
3	2	6
2	3	—
1	<u>4</u>	<u>3</u>
Total	15	22

Health

No statistics were available to the survey in 1962, but it is obvious that a most profound change has come about as a result of the establishment of the DEW Line. The Cape Parry community used to be almost 300 miles from a doctor; transportation and communication were infrequent and irregular.

Since 1957, the local population has, for emergencies, availed itself of the services of a first aid station, and often a doctor, based at Cape Parry. Thus quick diagnosis became possible, and immediate evacuation of serious cases to Inuvik could be arranged through the communication network of the DEW Line. Beyond this, health services are non-existent, no preventive medicine or health education is carried out, though this would seem one of the prime needs of this community.

Housing

While there is no standard definition of an "unfit" house, the housing in the Cape Parry village can only be described as inadequate. Three families stay in frame tents, and the remainder live in one room shacks constructed from DEW Line scrap materials. Insulation is generally lacking, the shacks are cold and difficult to heat.

Sanitation is poor. Neither outhouses nor inside toilets do exist, faeces, garbage, tin cans and old clothing are thrown from shack doors to add to the accumulated litter of rusting DEW Line bed-steads, mattresses and radio components. Dogs are tied to lines between the shacks, and resulting mounds of excreta do nothing to improve the appearance of the settlement.

Drinking water is obtained from a lake 100 yards from the settlement.

The scarcity of fuel determines the activities of the Cape Parry people during winter. A small quantity of drift-wood must be hauled by dog team for a distance of eight to ten miles. A snow storm may prevent gathering of more wood, and often forces the inhabitants to burn up the floors of their shacks and, in some instances, their furniture.

While the houses of the two families who camp at the head of Darnley Bay are little better than those of Cape Parry, their struggle for fuel is not so great. Their camp is located on top of a coal deposit.

Recommendation for Low Cost Housing

Lack of fuel combined with inadequate housing has resulted in totally unsatisfactory living conditions for the Cape Parry Eskimos. Priority should be given to this area in the low cost housing program planned for the district.

As long as the DEW Line continues to operate, Cape Parry will remain the major settlement on the peninsula. The resources and facilities of the radar station benefit the local Eskimos, but some people in the settlement have expressed a desire to live at the head of Darnley Bay in order to be closer to the coal and other resources in that locality. Resource harvesting projects planned will be an additional attraction. It is recommended that, for a start, four low-cost houses be built at the head of Darnley Bay.

This is not a question of resettling Eskimos because those involved might well wish to retain housing at both sites to take advantage of the various seasonal activities.

To sum up, housing at the head of Darnley Bay will bring some families closer to fuel, fish and caribou, and will allow the extension of traplines into unused country.

The establishment of a small outpost to carry staples such as flour, sugar and milk, should be considered. Such a post could be managed by a local Eskimo on behalf of the H.B. Company.

Cape Parry Facilities

The facilities of Cape Parry are meagre. The rocky ground prohibits the easy digging of frost cellars.

The Hudson's Bay Company and the Mission each produce their own electric power, and both establishments are heated by means of fuel oil.

The Hudson's Bay Company post is supplied once a year with staple goods and hardware.

The only boats of any size, a Columbia River fishing boat, and a modified life boat, belong to the Roman Catholic Mission.

The DEW Line operates a number of heavy tractors and over-snow vehicles. The policy on renting this equipment is nebulous, much depends on the attitude of the local DEW Line staff though. Generally, equipment is available to government agencies who have made prior arrangements through DEW Line headquarters.

Chapter VI

TRANSPORTATION AND COMMUNICATION

Water Transportation

The navigation season is from early June until late September, and during this period, Tuktoyaktuk receives the bulk of its supplies.

Tuktoyaktuk is the northern terminus of the Mackenzie River water transportation system, and a transfer centre for freight to DEW Line sites in the western Arctic, and to all the established communities east to Spence Bay.

Tuktoyaktuk Harbour accommodates vessels drawing up to 13 feet of water, sheltered anchorage with good holding ground is available in several places.

Two major transportation companies haul freight down the Mackenzie River to Tuktoyaktuk: the Northern Transportation Company Limited, and the Yellowknife Transportation Company Limited. Both companies use flat bottomed tugs displacing 250 to 350 tons, and these are used to push or pull two to three deck barges of up to one thousand tons capacity each.

Boats are dispatched as required by the quantity of freight to be moved. Neither Company carries passengers or operates a specific schedule. The first boat of the season generally arrives in Tuktoyaktuk during the last week of June, and the last boat of the season departs from Tuktoyaktuk about the third week of September.

Yellowknife Transportation Company Limited moves perishable goods and operates refrigerator barges within the Mackenzie River area.

Between late July and mid-September, freight along the Arctic coast is delivered by the Arctic Shipping Company Limited, a subsidiary of Yellowknife Transportation Limited, and by the Hudson's Bay Company Transport Division's M.V. Banksland which loads in Tuktoyaktuk and supplies the settlements to the east as far as Spence Bay.

The DEW Line sites are supplied separately by United States Navy L.S.T.'s and tanks operated by the "Sea Lift" Section of the Northern Transportation Company Limited.

Vessels and barges may be chartered from both transportation companies for daily, weekly or monthly periods. The monthly rates for vessels vary with boat size and range from \$2,000 to \$3,700. The monthly rates for barges range from \$1,200 for a barge of under 200 tons capacity to \$8,400 for a barge of 1,000 ton capacity,

A number of private contractors in Aklavik and Inuvik have small vessels and barges available for freighting on the river between Inuvik and Tuktoyaktuk.

Table 12 shows freight rates per ton for general cargo, perishable food stuffs and fuel oil in drums and bulk from points south.

Air Transportation

Persons travelling to Tuktoyaktuk generally do so by air. Except during break-up and freeze-up, Pacific Western Airlines operate flights from Inuvik to Tuktoyaktuk and return every second and fourth

TABLE 12
Freight Rates by Water

	To: <u>Tuktoyaktuk</u>	<u>Cape Parry</u>
From Waterways, Alta.		
General Cargo	\$70.00 per ton	\$105.00 per ton
From Hay River, N.W.T.		
Refrigerator Barge	111.00 per ton	No service
From Norman Wells, N.W.T.		
Fuel Oil in bulk	\$25.00 per ton	Not available
Fuel Oil in barrels	\$33.60 per ton	63.60 per ton
From Vancouver, B.C.	\$70.00 – \$80.00 per ton	\$100.00 – \$110.00 per ton

General Cargo

Freight Rates by Truck

From Edmonton, Alta. to Hay River, N.W.T.	\$51.60 per ton
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Freight Rates by Rail

From Edmonton, Alta. to Waterways, Alta.	\$32.60 per ton (depending on classification)
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Friday. Aircraft belonging to various non-scheduled air services in the region give frequent but irregular service to the settlement.¹

Wheeled aircraft use the 4,000 foot gravel strip at the DEW Line the year round.

Connection south from Inuvik is maintained by P.W.A.'s D.C. 6 B Aircraft which makes the return trip from Edmonton to Inuvik every Tuesday and Friday.

Pacific Western Airlines fares and freight rates from Edmonton to Inuvik and Tuktoyaktuk are shown below. Special rates are quoted by the Company for bulk shipments between Edmonton and Inuvik.

The settlement of Cape Parry receives no regular aircraft service. Non-scheduled aircraft sometimes pass over on flights from Inuvik to Sachs Harbour on Banks Island, and may land at the settlement if required.

The DEW Line is supplied weekly by Transair flying out of Winnipeg. Lateral flights along the DEW Line west to Tuktoyaktuk and east to Cambridge Bay take place normally at least twice a week. Eskimo DEW Line employees make frequent use of the lateral service to send packages to friends or relatives at other settlements. To travel along the DEW Line system persons other than DEW Line personnel require prior authorization.

Overland Transportation

Overland transportation in the region is necessarily confined to the winter months. Dog teams and, to a lesser degree, motorized toboggans, are the most common means of transportation.

In Tuktoyaktuk three bombardiers of one and a half ton capacity are available for hire at 50¢ per mile. Individual contractors haul freight from Inuvik by bombardier for \$85. a ton.

¹ In the fall of 1962, the managing director of Arctic Wings and Rotors Limited stated that he intended to base an aircraft at Tuktoyaktuk.

TABLE 13
Fares and Freight Rates

Edmonton TO:	<u>One Way</u>	<u>Express Rate</u>	<u>For shipments under 100 lbs.</u>	<u>For shipments over 100 lbs.</u>
Tuktoyaktuk	\$151.00	118¢ per lb.	55¢ per lb.	\$34.00 per 100 lb.
Inuvik	\$135.00	95¢ per lb.	44¢ per lb.	\$23.00 per 100 lb.

In addition to the scheduled service, P.W.A. has available for charter, Otter and Beaver Aircraft. Three other chartered aircraft companies operate in the region. The type of aircraft and charter rates are shown in Table 14.

TABLE 14
Other Aircraft Companies

<u>Name of Company</u>	<u>Class of Service</u>	<u>Base</u>	<u>Type of Aircraft Used</u>
Aklavik Flying Service Ltd.	4BC,9-4	Inuvik	Beechcraft 18 Beaver DH6
Arctic Wings and Rotors Ltd. ¹	4BC	"	Cessna 186, Cessna 195
Reindeer Air Service Ltd.	4C, 7 API	"	Cessna 180, Cessna 185
			Cessna 170B Stinson 180-2

Aircraft Charter Rates

<u>Aircraft</u>	<u>Per Mile</u>	<u>Per Hour</u>
Otter, P.W.A.	\$1.05 — 1.15	\$110.00 — 124.00
Beaver, P.W.A.	.77 — .88	77.00 — 88.00
Beaver, DHG	.86	87.00
Beechcraft 18	.80	129.00
Cessna 180	.50	60.00
Cessna 186	.60	81.00
Cessna 185	.54	71.50
Cessna 195	.60	72.00
Cessna 170B	.50	50.00
Stinson 180-2	.50	50.00

Distances

The distance in miles between the settlements of the region and other principal points is shown in table 15.

Radio Communication

Radio communication in Tuktoyaktuk, as in many other parts of the lower Mackenzie valley, is subject to much static interference, and absolute black-outs at certain times of the year. Conditions permitting, commercial messages are sent out once a day by the Hudson's Bay Company to the Department of Transport radio station in Inuvik.

The R.C. priest operates a daily radio schedule with the R.C. Mission in Inuvik, and has the equipment to get in touch with many other Roman Catholic Missions in the Arctic.

During the navigation season, the transportation companies working in the area transmit and standby on assigned frequencies. In the fall of 1962, the manager of Arctic Wings and Rotors Ltd. indicated that he would maintain a land based radio transmitter to work the aircraft he intended to base in Tuktoyaktuk.

At Cape Parry commercial messages are handled by the Hudson's Bay Company which transmits to Cambridge Bay. During 1962 radio transmitting equipment was being installed in the R.C. Mission at Cape

TABLE 15
Distance in Miles Between Principal Points

<u>By Aircraft</u>				
	<u>Between Tuktoyaktuk</u>		<u>Between Cape Parry</u>	
and	Reindeer Depot	59	Tuktoyaktuk	208
	Inuvik	80	Inuvik	245
	Sachs Harbour	255	Sachs Harbour	130
	Yellowknife	792	Coppermine	297
	Edmonton	1448	Winnipeg	1600
<u>By Boat</u>				
	<u>Between Tuktoyaktuk</u>			
and	Cape Bathurst	150		
	Cape Parry	240		
	Coppermine	586		
	Reindeer Depot	89		
	Inuvik	109		
	Hay River	1122		
	Waterways, Alta.	1690		

Parry. The DEW Line communication system at Cape Parry may be used by authorized persons to telephone any place in the world! Eskimos employed on the DEW Line use this system to exchange news with friends based at other sites. The Department of Transport at Cape Parry maintains a weather station and provides forecasts for the region.

Table 16 lists the principal assigned radio frequencies used at Tuktoyaktuk and Cape Parry.

TABLE 16
Assigned Radio Frequencies

<u>Operator</u>	<u>Frequency</u>	<u>Points Worked</u>
H.B. Co. Store, Tuktoyaktuk	4455kc	Inuvik
H.B. Co. Store, Cape Parry	4455kc	Cambridge Bay
Northern Transp. Co. Ltd.	5940kc	All Boats
R.C. Mission, Tuktoyaktuk	4356kc	Inuvik & Other Mission
R.C. Mission, Cape Parry	4356kc	" " " "
R.C.M. Police, Tuktoyaktuk	5445kc	Other R.C.M.P. Posts
	4270kc	

Mail Services

The mail service to Tuktoyaktuk is peculiar. Several years ago, before Inuvik was established, and before the beginning of P.W.A.'s regular run to Tuktoyaktuk, a contract to carry mail was awarded to Aklavik Flying Service. Today this contract still binds Aklavik Flying Service to deliver Tuktoyaktuk mail three times a year. In actual practice, and as a result of an increase in business, A.F.S. delivers mail at least once a month. Outgoing mail leaves more often. The post office is operated by the Hudson's Bay Company and its manager is able to ready a mail bag at a moment's notice. Much mail is handed by individuals to pilots for posting in Inuvik.

Since mail service is so irregular and unpredictable, one can only wonder why the mail carrying contract is not awarded to Pacific Western Airlines.

Cape Parry does not have an official post office or mail service. However, mail arrives at least once a week from all points of the compass via the DEW Line system.

Radio broadcasting

In November 1960, the Canadian Broadcasting Corporation opened a 1000 kw radio station CHAK, at Inuvik.

CHAK does much to foster regional consciousness by transmitting many programs of local interest. The station features, along with the regular CBC fare, weekly news items from the communities in the region, talks on game and fish conservation, messages in English, Eskimo and Indian from hospital patients to their relatives. A thrice daily short program relays personal messages to people in their trapping camps.

Since these radio broadcasts reach into every home, their importance as a medium of adult education cannot be over-estimated. It is planned to launch this type of program as soon as the Education Division of the Department of Northern Affairs brings its staff up to strength.

PART II

**THE ECONOMY AND RECOMMENDATIONS
FOR ITS IMPROVEMENT**

Chapter VII

CAPITAL AND EMPLOYMENT

Sources of Cash Income – Tuktoyaktuk

During the past ten years the economy of the Tuktoyaktuk region has changed from a hunting, fishing and trapping base to one of wage employment.

The establishment of a transportation centre, Government services, the building and maintenance of the DEW Line system have resulted in wage employment providing 66% of the population's cash income. The growth of wage employment over the past eleven years is shown in table 17.

TABLE 17
Tuktoyaktuk – Growth of Wage Employment 1951 – 1962

1951-52	\$ 5,000.00	(Territorial Division, Dept. Northern Affairs)
1956-57	\$ 62,000.00	(J.D. Ferguson, NCRC 61-2)
1961-62	\$105,000.00	(Area Economic Survey, Dept. Northern Affairs)

The distribution of Tuktoyaktuk families by income is shown in figure 2. The principal sources of this income are illustrated in figure 3.

Permanent Employment

The various government agencies employ seven people full time, six of whom are family heads. The income to this group totalled \$26,500.00. The persons employed by the government agencies fall into the usual categories of janitor, handyman, school caretaker, and the R.C.M.P. special constable. The R.C.M.P. pilot who is hired for the four summer months is included in the above group.

Five people, three of whom are family heads, had worked on the DEW Line for a full year and earned \$20,600.00.

The Hudson's Bay Company retained two men and one girl. One man, a labour foreman, was paid \$2,400 for the full year, and the other, a ship's mate was paid \$2,800.00 for the duration of the navigation season. The girl, who helped out in the store, received \$1,320 for the year.

The Northern Transportation Company Limited employed a handyman – labourer at \$4,000.00. One man worked with a Native-owned reindeer herd for \$1,200.00. The Pacific Western Airlines agent, an Eskimo, received \$50 a month for his part-time services.

For the period discussed, 12 men who did not work a full year earned \$22,300.00 between them. Some of these men worked for transportation companies and reindeer herds but the majority were employed on the DEW Line.

Casual Labour

Government agencies are the principal employers of casual labour ranging from \$16 for one day's work to \$2,620.00 paid to a man employed as a carpenter. The total increase from casual labour amounted to \$37,879.00 for the year. Work on Government construction projects and stevedoring on the H.B.C. supply vessel provided 21 men with an average income of over \$1,000.00 cash.

FIGURE 2
Tuktoyaktuk 1962
Distribution of Families by Income

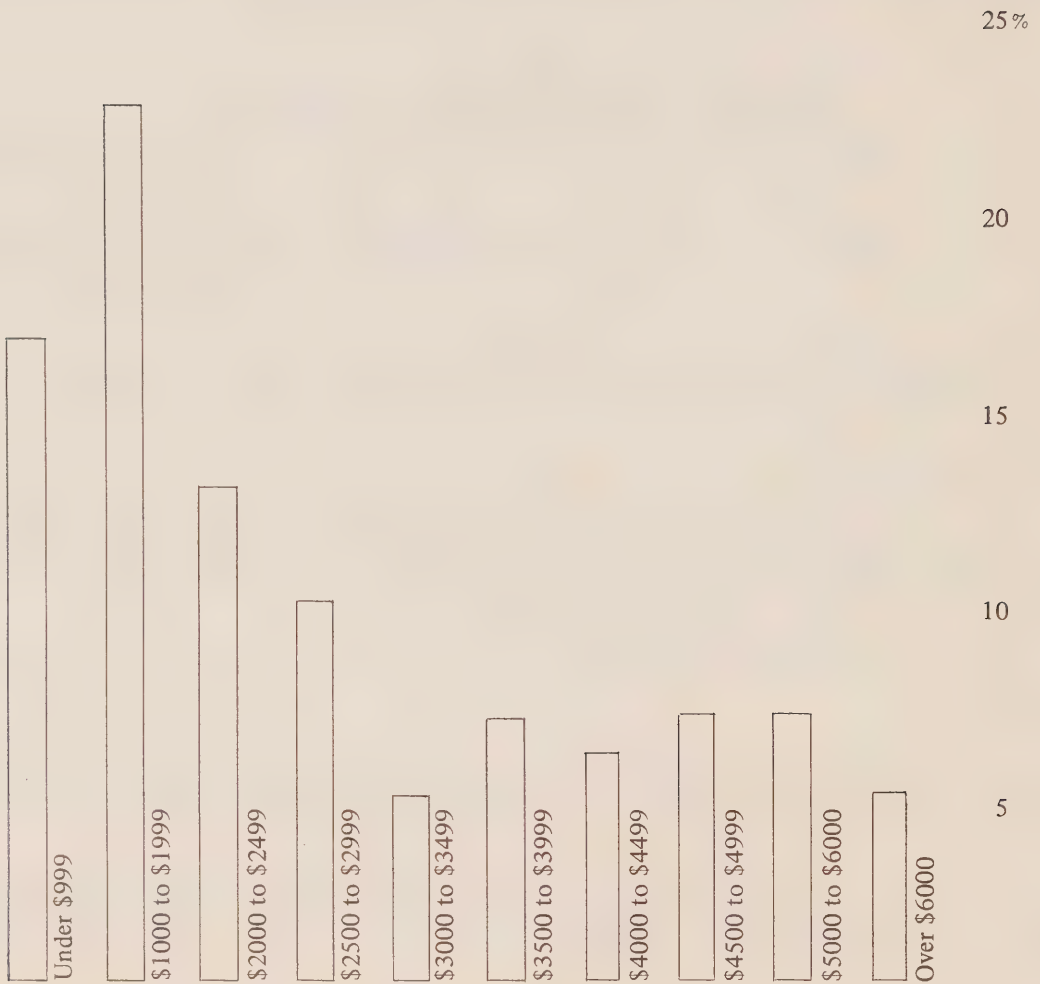
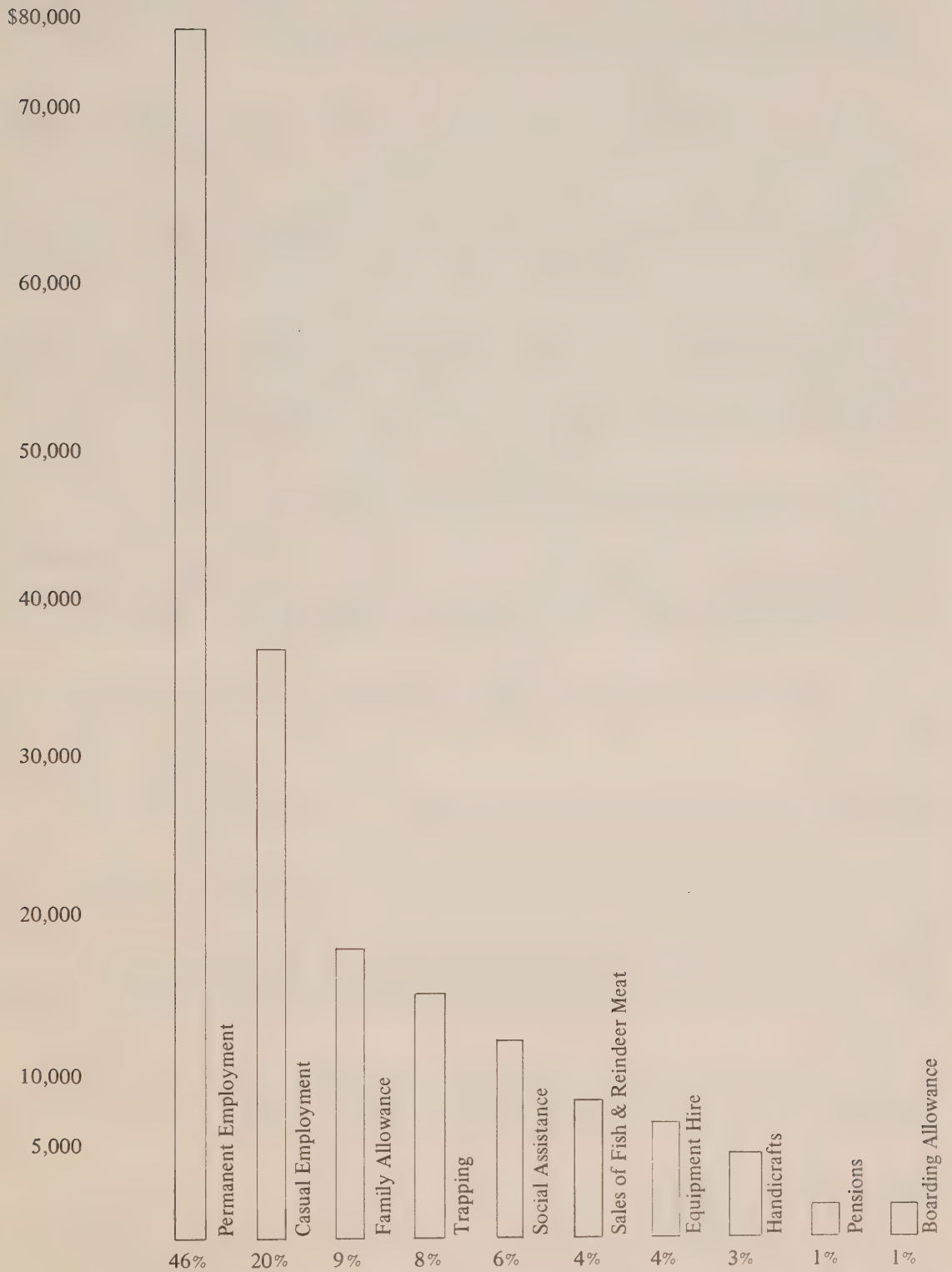


FIGURE 3
Tuktoyaktuk

Sources of Cash Income for the Year Ending June 1962



During the summer months, six to eight men worked casually for a day or two loading and unloading the H.B.C. supply vessels. Information for the total earned by these men was not available and is thus not shown in Figure 3 but the total is thought not to exceed \$1,000.00.

Although casual labour has provided the community with an annual average of \$30,000.00 for the past five years, this source of income may be expected to decline in the near future with the completion of Government building projects. An opportunity to compensate this decline does exist with the Northern Transportation Company Limited.

As an employer of local labour this Crown company could make a greater contribution to the local economy than it is now doing. Every year it employs 119 men for a period of four months at a total wage bill of \$269,492. In the summer of 1962 only three of these 119 men were local Eskimos.

The N.T.C.L. operation can be divided into three phases. *The Radium Line* hauls freight from up the river to the Tuktoyaktuk depot. Boats of this Line winter at Bell Rock, near Fort Smith, or at Mills Lake on the Mackenzie River. Crews are hired in the provinces, and the same crews are generally employed year after year.

The Tuktoyaktuk Depot employs 38 men to unload freight for transfer to vessels of the "Sea Lift" supplying the DEW Line sites west and east along the Arctic coast. Not all the 38 men are stevedores, some are radio operators, cooks, clerks and first aid men, but 15 of this number are labourers, four are dish washers, and four are equipment operators. Their pay averages \$350 a month.

The Sea Lift employs 81 men on the ships supplying the DEW Line sites in the western Arctic. These vessels winter in Tuktoyaktuk, and repair and maintenance on them is carried out there.

In connection with the Tuktoyaktuk depot, 10 to 15 Eskimos capable of operating equipment and performing labouring tasks could easily be found. The section in this chapter dealing with sources of cash income showed that in 1961/62 21 local men earned over \$1,000 each on casual wage labour in the settlement. This demolishes the argument that Eskimos are work-shy and unreliable.

It is suggested, therefore, that the Northern Transportation Co. Ltd. be requested to hire local Eskimos for some of some of the jobs at the Tuktoyaktuk depot for which men are now being imported from the south.

It is important to ensure from the start that the Company finds Eskimo labour satisfactory, and eventually to be preferred to the expense of imported labour.

It is proposed that a labour pool of 10 to 15 men or less but backed by a reserve of, say, five, be created to furnish a constant and dependable supply of labour for the N.T.C.L. operation. Since good liaison is imperative to guarantee success, a man capable of handling Eskimos with tact and understanding is required. His duties in part would consist of making certain that the men required for work show up on time, and that those unwilling or unable are replaced by others from the reserve. He would also act as an intermediary to iron out differences and misunderstanding between the Eskimo men and Company management.

Once the Company has been convinced of the Eskimo's reliability as a dependable worker, suggestions can be put forward that Eskimos be employed as seamen. At present, only the H.B.C.'s supply ship carries local Eskimos as seamen. These men have proved themselves satisfactory.

Family Allowance Payments

These payments amounted to \$18,960.00. Of this sum 3,000.00 was paid to the Inuvik school hostels for the Tuktoyaktuk children resident in these institutions. It should be noted that the net family allowance payments exceed the income from trapping.

Trapping

1961/62 was a high phase in the white fox cycle with \$15,718.00 being realized from the sale of fur. However, the five year average income from fur has been in the region at \$11,000.00¹ and this figure is a better guide to the income earned from trapping over the years. Table 18 shows the distribution of Tuktoyaktuk trappers by income.

TABLE 18
Distribution of Trappers by Income from Trapping 1961/62

\$1,000.00 or more	4 trappers
500.00 – \$1,000.00	8 "
300.00 – \$ 500.00	7 "
less than 300.00	25 "

Of the four men who earned over \$1,000.00, three were Metis and one was Eskimo. The latter's trapping income was inflated by \$350 received for a live polar bear cub sold to a Vancouver zoo.

Two of the Metis are bush trappers. Before freeze-up they airlift their dogs and equipment into the interior. One is a married man who takes his wife and young children with him. They fish until freeze-up, and when the season opens they concentrate on marten trapping. A few mink are taken incidentally. The third Metis, using a bombardier, traps east and west along the coast for a distance of 250 miles. This man moved to Tuktoyaktuk from the Coronation Gulf area recently. He is one of the most energetic and best educated men in the settlement. His experience includes trading as well as trapping. He holds a master's certificate and has been in charge of H.B.C. supply vessels sailing in the western Arctic.

When the activities of the second highest income group are examined, it is found that one is a bush trapper, two share a bombardier, and three others are the trappers at Cape Bathurst, 140 miles from Tuktoyaktuk.

Seven trappers earned between \$300 and \$500. In this group it is interesting to note that a father and his two sons used a motor toboggan in support of their dog teams. Two other used a bombardier.

Twenty-five men in the lowest group shared \$2,300.00. Their trapping efforts ranged from two traps set on a refuse heap to 21 foxes taken by one man trapping along the coast.

Sales of Reindeer Meat and Fish

This amounted to \$9,050.00 and with few exceptions represents meat and fish sold to the Hudson's Bay Company in Tuktoyaktuk, to various government agencies, and to individuals in both Tuktoyaktuk and Inuvik. Fish, whale and whale meat sold in the settlement by one Eskimo to another are discussed under Other Sources of Income.

Reindeer Meat

The heads of two Eskimo families are proprietors of the reindeer herd known as a Native Herd No. 4. During the period under survey 175 animals had been slaughtered for sale. Revenue from the sale of meat and hides amounted to \$8,000.00.

Of this sum \$1,200.00 was paid in wages to Tuktoyaktuk men hired to assist with herding and the remainder was split between the two owners.

Fish

During the winter months, six men sold \$1,050.00 worth of inconnu, whitefish, and trout. The major portion of this went to one of the bush trappers who received \$750.00 for 1,500 lbs. of trout he sold in Inuvik.

¹ Ferguson NCRC-61-2

The other five fishermen shared \$300.00 realized from a winter fishing project encouraged by the Area Administrator.

Equipment Hire

Four men rented their equipment out for hire. Two men with bombardiers earned \$4,000.00 and \$300.00 respectively. One man chartered his schooner to an exploration company for \$3,000.00, and another was paid \$640.00 for transporting children to and from school.

Social Assistance

For the year ending 30 June 1962 social assistance payments amounted to \$12,971.00, a sum equal to 6% of the community's income. These payments are either for direct relief, or for relief work. Direct relief is issued in the form of food, fuel and clothing. Relief work is a sinter works program set up by the Department of Northern Affairs to provide men with a cash income at a time when no other income is available to them.

Direct Relief

During the year 28 families received assistance totalling \$8,417, of this sum 89% was paid to thirteen families completely dependent upon relief assistance, for all or part of the year, because of illness, old age or widowhood. These families are listed in table 19. Family Allowance payments are also shown as this was often the only other source of cash income, and gives an indication of the family's size.

TABLE 19
Direct Relief Payments

<u>Social Assistance</u>	<u>Family Allowance</u>	<u>Remarks</u>
\$1548	\$ 504	Family head T.B. patient
592	384	Family head T.B. patient
940	912	Two women T.B. invalids
803	144	Wife T.B. invalid
698	144	Family head crippled
453	432	Family head T.B. patient
427	—	Single woman, almost blind
404	—	Old Widow
394	96	Crippled woman, unmarried
286	456	Rehabilitation case
254	576	Rehabilitation case
191	—	Old widow
<u>118</u>	<u>216</u>	Wife T.B. patient
Total \$7468	\$3864	

The remaining \$949 of social assistance was shared by 15 families in amounts ranging from \$10 to \$100. On the whole this represented food required to tide various families over lean periods of a few weeks. In some cases the issue was part of a recoverable grubstake.

Issue of Reindeer Meat

Not included in the above totals are 1800 lbs. of reindeer meat distributed among those families requiring assistance. This meat was valued at \$950.

Virtually no fish was given to needy families. It would be to the advantage of the local fishermen, the indigent families, and the Department of Northern Affairs if more fish were issued as part of the relief ration.

Relief Work

Work projects provided the community with an additional \$4,554.00. Thirty-nine men participated in projects such as general snow clearance and moving of oil drums, but the biggest single project was the completion of the community frost cellar.

The wages paid to individuals varied from \$12 for a day's work to \$249 for 35 days' work. The number of days worked by each man depended partly on his inclination, but was generally governed by the number of his dependents. The principle being that, a man with a large family was given an opportunity to earn more than a man with a smaller family.

Handicrafts

For the year reviewed the women of 37 families produced handicrafts worth \$6,038.00. Among the articles fashioned were parkas, mitts, mukluks, slippers, dolls and rugs. One man carved figures from wood or stone, another made miniature kayaks and drums from reindeer skin. The patriarch of the settlement made an estimated \$160.00 worth of ulus.

Handicrafts are made in the home, guidance as to what is sought by the tourist trade is given by the teachers and the Administrator. The finished articles are sold either direct to customers or are put up for display in show cases located in the school.

One thousand dollars worth of handicrafts was sold by the Tuktoyaktuk people in 1957. Five years later this figure had increased to \$6,000 and three per cent of the community's income. It is suggested that the income from handicrafts in both Tuktoyaktuk and Cape Parry can be expanded by a handicraft officer devoting a few hours a month to the project. Two lines in particular come to mind.

Artifacts such as arrow-heads, harpoons and fish-hooks can be cheaply fashioned from reindeer antlers and whale teeth. In this case the raw material itself has sales appeal, and the articles produced will have a market in the south, and will be bought by those transients who do not wish to burden themselves with the more expensive fur garments, dolls or slippers.

Raw fur of low market value, such as coloured fox, would be readily bought above market prices by tourists seeking northern souvenirs. This type of fur should be displayed for sale along with crafts.

Pensions

Old Age Security, Old Age Assistance and Disability Allowances totalling \$2,750.00 were paid to five persons. With one exception, all the recipients helped to support relatives whose incomes were relatively low.

Boarding Allowances

Boarding Allowances are payments such as Foster Home Care and allowances paid to individuals for boarding patients waiting transportation to hospitals, or Eskimos in transit to and from DEW Line sites.

Fourteen families were paid allowances ranging from \$29 to \$608 for a total of \$2,729.00.

Other Sources of Cash Income

Income was also earned from exchange of goods and general barter within the community. The magnitude of this trade is not known but some exchange values are given below. These vary considerably with the supply and demand.

Seven hundred pounds of moose meat were given by one hunter to the owner of a bombardier for a 110 mile round trip into the bush. Had this trip been paid for in cash, \$55 would have changed hands.

One man received \$450 for six sled goods sold to a trapper on Banks Islands.

Another sold 1,000 "Crooked Back" whitefish surplus to his needs for \$60.00. Normally "Crooked Backs" sell from 75 cts to \$1.00 each.

Fish bought in small quantities sell at the following prices:

Lake trout 40 cts a pound,
Whitefish 20 cts a pound,
15 smoked dried whitefish at \$10.00
Dried fish 25 cts a pound (price paid by the RCMP)

Other items:

A Square-flipper sealskin, \$20.00
A Caribou skin used for a sleeping mat, \$3.00 – \$4.00
A wavy goose, \$3.00
Building logs 20 foot long, six inch diameter, \$4.00 to 5.00 each
Power and telephone poles sold to N.A. & N.R., 30 cts a foot.

Whale Hunting

Spoils of the hunt may be shared 50/50. Half the whale goes to the boat owner and the remaining half to the other hunter who supplies fuel and help, or, if the boat owner supplies both the boat and fuel then two-thirds goes to the boat owner, and one-third to the party or parties supplying help. White whales sold from \$35 to \$60 depending on their size. This is a high price but accurately reflects the value Eskimos place on whale products. Whale oil and muktuk sell for \$1.00 a gallon.

Firewood

Firewood sells in quantities varying from a toboggan to a bombardier load. The cost per cord ranged from \$40 to \$50 but how this price was arrived at could not be established.

Gambling

Some families had a low cash income from the sources previously described but enjoyed a standard of living apparently equal to the average. The heads of these families were reputed to be professional gamblers. Ferguson in 1957 had this to say about gambling: "The skilled trapper is often the skilled poker player and they derive a large part of their income from gambling. At least five families are dependent to a large extent on gambling income for their subsistence."

Ferguson estimated that the wage employees as a group lost approximately 15% of their income or about \$10,000.00. There is little doubt that most of this as well as the money lost by transient Eskimos from the DEW Line, is retained in the community.

Fur Garment Industry

On October 25, 1962, 12 women were enrolled in a fur garment making project. This project managed by an experienced furrier, on behalf of the Education Division of the Department of Northern Affairs, will teach women to sew seal and muskrat parkas, slippers, mitts and rugs destined for southern markets.

For an initial period of two months the trainees were to be paid 60c an hour for a 35 hour week. Piece work rates will be paid after the end of the training period.

Sources of Cash Income – Cape Parry

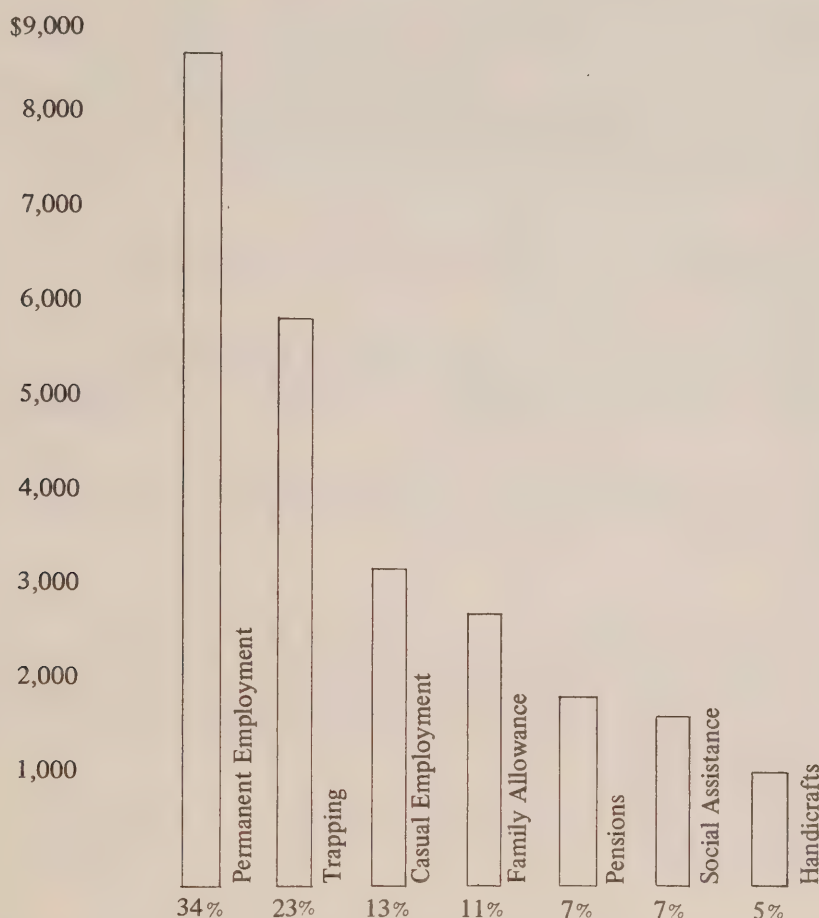
Seventeen families trade into Cape Parry, and of these, 15 live at the settlement, and two families spend most of the year close to the mouth of the Hornaday River.

As table 20 show, their cash income is low. Only the two families attached to the DEW Line earn more than \$2,500 a year.

TABLE 20
Distribution of Families by Income

<u>Income Group</u>	<u>Number of Families</u>
Less than \$1000	7
\$1000 to \$2000	17
\$2000 to \$2500	1
More than \$5000	2

Figure 4 indicates the sources of the settlement's cash income for the Year Ending June 1962.



Wage Employment

Figure 4 shows permanent employment contributing 34% of the community's cash income. This is earned by two families at the DEW Line who are paid \$4,800.00 and \$4,000.00 respectively. Since these two families are closely related to many of the villagers the community derives some benefit from the positions and relatively high income of the DEW Line employees. Food, clothing, and often furniture find their way to the village. Young children are boarded with their DEW Line relatives, and adults are fed on their frequent visits.

During the period, casual employment brought \$3,325. All but \$275 of this was earned by four men on casual DEW Line employment. One man was paid \$125 for carrying the Area Administrator by dog team on a winter patrol. One hundred and fifty dollars were earned by 10 men unloading the annual supply ship.

Trapping

The wage income from the DEW Line is paid to relatively few people. White fox and polar bear skins provide 23% of the community's income. Twenty trappers sold 570 white fox and 15 polar bears for a total of 6,018.00.

It is of interest to note that a quarter of this catch is sold to white DEW Line employees at prices slightly higher than those paid by the Hudson's Bay Company.

The highest return from trapping to any one family was \$745.00, the lowest \$76.00. Trapping income averaged \$330.00 per family as compared to \$357.00 earned by Tuktoyaktuk trappers.

Family Allowances

Family Allowances payments formed 11% of the community's total cash income in 1962. Twelve hundred dollars deducted to pay the Inuvik school hostels boarding Cape Parry children. \$2,700.00 accrued to the community.

Handicrafts

For the year ending June 30, 1962, the value of handicrafts produced amounted to \$1,200.00 or 5 of the total cash income.

The handicrafts program was started in July 1961 by a U.S. Airforce Officer attached to the DEW Line site at Cape Parry. This officer took an interest in the people of the village, and persuaded them to save the sealskins they had previously fed their dogs.

During the first 12 months the people saved 100 ringed sealskins for which the local Priest paid \$5.00 each. The Priest, using Mission funds, had the skins processed by a tanner in Winnipeg flew the skins south and back gratis.

The tanned skins were turned back to the Eskimos, who, under the guidance of the Airforce officer, produced slippers, mitts, dolls, purses and bow ties. All these articles found a ready market on the DEW Line site. From the beginning, this officer insisted on the use of factory tanned skins, and demanded a high standard of quality for the finished articles. Production was well organized and efficient. Sealskins were utilized to the full and since mark-up was low and transportation costs nil, handicrafts sold well below the price set for similar articles elsewhere.

Two things handicapped this program. Shortage of money to pay for the tanning process, and lack of skins to keep the enterprise going.

If the organized sealing proposed for this area proves successful thought should be given to locating a small and simple tannery at Cape Parry. This would give the settlement an industry other than hunting and fishing, and the \$3 to \$4 per sealskin now paid to an outside tanner would be retained by the community.

Pensions

Income from pensions came to \$1,980. Three persons received allowances of \$660.00 each. A widow was paid Old Age Security, a widower Old Age Assistance, and a third received a total Disability Allowance.

Social Assistance

Direct relief for the year amounted to \$1,969.00 or \$13.50 for every man, woman and child not directly dependent on the DEW Line station. Considering the poverty of the people the relief bill is remarkably low. An explanation for this might lie in that social assistance is administered on behalf of the Department of Northern Affairs by the Roman Catholic Priest together with the manager of the local

Hudson's Bay Company store; and that canned foods trickle through to the village in ample quantities from the DEW Line station.

Since this community of hunters and trappers expends \$1,900 a year on cartridges much assistance is given in the form of ammunition.

Gambling

As in Tuktoyaktuk gambling is popular. Money or rifle shells may be used for tender. Gambling skills are probably such that, on the whole, money enters rather than leaves the community.

Working Capital

Table 21 lists the equipment and sled dogs counted during the summer of 1962 and illustrates the relative wealth of the Tuktoyaktuk community.

TABLE 21
Capital Equipment at Tuktoyaktuk

<u>Type</u>	<u>Number</u>	<u>Approximate replacement average value</u>
Bombardiers	3	\$ 5,000.00
Motor Toboggans	7	1,000.00
Canoes, all sizes	33	350.00
Whale boats	5	4,000.00
Schooners and Fishing Boats	4	to 12,000.00
Speed Boats and Dinghies	18	400.00
Outboard Motors	38	180.00
31/2 to 40 HP		to 650.00
Fox Traps	7,300	.93
Rifles and	148	22.00
Shotguns		to 160.00
Toboggans and Sleds	50	50.00
Sled Dogs	320	—

Some of this equipment was old, some was new, but all of it was serviceable. Two individuals owned 500 fox traps each, but 170 was the average number of traps owned by those trappers who had trapped the previous winter. This was almost three times as many as the average trapper of Cape Parry possessed.

As it can be seen from table 21 there were five bombardiers, nine motor toboggans and 38 outboard motors in the settlement of Tuktoyaktuk in the summer of 1962. Indications are that this type of equipment will increase over the years to come.

The advantage of a dog-team over a motor toboggan, and of a paddle over an outboard motor, lies only in the ability of the operator to effect repairs on-the-spot. Motor toboggans and outboard motors break down when they are needed most, and then remain out of action for want of a simple part that must be ordered and brought in from the south. This can be a long and frustrating process, more so when the part that finally arrives turns out to be unsuitable.

It is therefore recommended that a shop be set up for the repair of mechanized equipment. An equally important function of this shop would be to stock the spare parts commonly required, to order spare parts for those who wish to carry out their own repairs, to have on hand and to rent out, if necessary, the special tools and instruction manuals required for a variety of equipment.

There is a man in Tuktoyaktuk who has the background and the capital to run this type of enterprise. He attended the Leduc training course in 1957, worked his way up on the DEW Line to become a mechanic, saved \$10,000 while doing so, and completed a mechanic's correspondence course at the same time.

This man has expressed interest in operating a motor toboggan and outboard motor repair shop. While he may not need any direct financial assistance, the Department of Northern Affairs might encourage a start by giving him advice on how to run a business, the type of stock and tools to carry, and what suppliers to get in touch with. The Department might further support this business by placing orders and having its equipment repaired in his shop.

Capital Equipment at Cape Parry

The shortage of capital equipment at Cape Parry is serious and is generally reflected by the low income per capita – \$325.00 from all sources as compared to \$475.00 per capita at Tuktoyaktuk.

In 1962 the area survey counted five dinghies, one canoe, three outboard motors, 1,225 fox traps, 52 rifles and shot guns, 152 dogs and 20 dog sleds and toboggans.

The canoe and two dinghies were barely seaworthy. One outboard motor was out of action for want of a propeller shaft. A covered life-boat and a Columbia River fishing boat, both powered by inboard motors, are owned by the Roman Catholic Mission. During the summer of 1962, the people of Cape Parry used these boats as they wished. One man also had use of a small dinghy, known as the welfare boat, which had been sent in from Tuktoyaktuk by the Department of Northern Affairs.

Fish and Sea Mammal Nets

There is no shortage of gill nets in Tuktoyaktuk. Four sweep-nets were in operation, two owned by private individuals, one by the Department of Northern Affairs also had several whale and seal nets but no local people showed interest in using these.

Because of the lack of eating fish in the waters around Cape Parry, no gill netting is done in the vicinity. Fishing is carried out in the lakes 40 miles south of Cape Parry and beyond, and in the Delta of the Hornaday River. During the summer of 1962, fish nets used by the people in the area were in poor condition and generally inadequate.

The Mission owned one short seal net which it made available to anyone interested in using it.

Savings and Expenditures

In the summer of 1962, neither the H.B.C. post at Tuktoyaktuk nor the post at Cape Parry held any savings on deposit. Some individuals at Tuktoyaktuk who had been employed, or still were employed, on the DEW Line, had bank accounts in Inuvik or Edmonton. The H.B.C. post manager in Tuktoyaktuk commented that the cheques issued by persons no longer employed were generally returned marked "Insufficient funds". This is not surprising considering the quantity of luxury articles, such as record players, tape recorders and movie cameras, and the number of high priced rifles and outboard motors bought by ex-DEW Line employees. The only apparent exception, a Metis, saved \$10,000.00 after working several years on the DEW Line. This man invested some of this money in a fishing boat, a motor toboggan, and materials for a house.

From the research done by the area survey it appears that there are little, if any, savings.

The H.B.C. Post manager at Tuktoyaktuk who doubles as the settlement's postmaster, estimated that the Eskimo population spends \$5,000.00 a year on C.O.D.'s from mail order companies in the south. Until August, 1962, the H.B.C. was the only trader in Tuktoyaktuk. Considering that a negligible amount of business went to Inuvik, the Area Survey estimated that during the period discussed the Company sold approximately \$200,000.00 worth of merchandise to the Eskimos, Indians and Metis of Tuktoyaktuk.

During the year reviewed, Cape Parry H.B.C. Post took in \$26,000.00, only a few hundred dollars short of the community's total cash income. Expenditures by families were obtained from receipts. How

the Eskimos in different communities spend their money is set out in table 22, along with comparative figures by Ferguson for Tuktoyaktuk (1956) and by Yatsushiro for Frobisher Bay (1959).

TABLE 22
Pattern of Expenditures

	<u>Cape Parry 1962</u> <u>Area Survey</u>	<u>Tuktoyaktuk 1956</u> <u>R.C. Ferguson</u>	<u>Frobisher Bay 1957</u> <u>T. Yatsushiro</u>
<u>Food:</u>			
Store food	29	55	19
Candies & soft drinks	4	included above	7
<u>Clothing:</u>	26	16	17
<u>Hunting Equipment & Supplies:</u>			
Guns and ammunition	8	5	3
Boats and motors	—	8	11
Dog food	4	3	—
Fuel and miscellaneous	7	5	2
Traps	4	included above	—
<u>Household Goods:</u>	7	5	11
<u>Tobacco:</u>	11	—	10
<u>Country Food:</u>	—	3	—
<u>Cameras, radios, toys, etc.:</u>	—	—	20
	<u>100*</u>	<u>100</u>	<u>100*</u>

*All fractions rounded to whole figures. Expenditure expressed as cents per dollar or percentage of total expenditure.

The pattern of expenditure for Cape Parry reflects a subsistence and hunting economy of a traditional community. Twenty-three per cent of the people's income spent on hunting equipment and supplies but none on boats or motors. Clothing, mostly men's and yard goods, accounted for another 26% — this is what one would expect in a community where nearly every adult male is out on the trap line in a country that provides little shelter from continuous winds. There was no money to spend on luxury items such as cameras or radios.

Ferguson in 1956 estimates an average budget on an assumed income of \$1,850.00 per family.

Professor Yatsushiro analysed the combined nine months expenditures of six Eskimos employed in Frobisher Bay by the Department of Northern Affairs. The pattern here is one of a transitional society. It is reproduced in this report as guide to the possible trend in Tuktoyaktuk.

Chapter VIII

NATURAL RESOURCES

Fur Bearers

White Fox

Until the economy of the region shifted from trapping to wage employment and Government allowances, sales of white fox skins provided most of the region's cash income. 1961-62 was the high phase in the cycle of the white fox, and a good trapping year, but the return from trapping was no more than 11% of the total cash income from all sources.

The Tuktoyaktuk trappers take white fox along the coast, and on the peninsula between Tuktoyaktuk and Cape Dalhousie, and on the small islands and "flats" to the west. The one family resident at Cape Bathurst operates trap lines radiating out from its camp to Whale Bluffs and Harrowby Bay to the south, and day lines around Baillie Islands.

The trappers of Cape Parry generally trap within 50 miles of the settlement. Of the two families at the head of Darnley Bay, one traps across the base of the Parry Peninsula, and the other runs a long line across the interior to Pearce Point or after the sea has frozen over, along the coast to Cape Lyon.

Although the white fox season opens on November 1, intensive trapping does not start until the fur becomes prime at the end of November.

Generally, trap lines are run parallel to the coast until Christmas when the sea freezes. By spring time, the lines spread out over the sea ice towards the open water where trapping is often more successful.

The trappers in the region travel in parties of two or three and run lines 30 to 70 miles long. It often takes three to seven days to complete a circuit. The average trapper using a dog team makes six trips during a season.

Throughout the winter the Tuktoyaktuk trappers use tents heated by gasoline or coal oil stoves. The Cape Parry people use tents only until sufficient snow is on the ground to provide building blocks for snow houses.

The Tuktoyaktuk trappers, with the exception of one man who fishes while on his trap line, carry enough food to sustain their dogs until they return home. This is not to say that the occasional seal they come across is not taken but rather that they neither rely on taking seal nor do they make any special efforts to take food while travelling.

At Cape Parry the trappers depend more on seal and caribou meat put up in caches, and they fish for both human and dog food under the ice.

To trap fox, advantage is taken of the animal's natural curiosity which draws it to inspect blocks of old ice or mounds of snow. These conspicuous sites are literally plastered with traps, two to six may be put in one such place. The traps are set where they will remain free from drifting snow, and are baited with food natural to the location. On land the bait may be ptarmigan; fish, seal or whale oil is used on ice.

The traps are covered with loose fresh snow, or a wafer of snow from a drift. To prevent the tongue freezing to the covering layer some trappers use moss and others pass a sheet of tissue paper from under the jaws over the tongue of the trap.

To identify his traps each man sticks small twigs into the snow close to his traps, and arranges the twigs according to a definite pattern or combination of numbers and angles. A trapper expects to lose 10 to 12 per cent of his traps each season. A storm will cause the ice on which the traps are set to drift away, or the chain anchoring the trap will break and the fox caught will walk away with it. An Eskimo's disposition being what it is, he will often be lax in gathering all his traps, at the end of the season, and so more are lost. The fact that many trappers, especially those at Cape Parry, are short of traps, is one of their own making.

Over the past 12 years the annual average catch in the region has amounted to 846 white fox. As table 23 illustrates this average figure is no indication of what may be caught from one year to the next. Since foxes vary cyclically in numbers a good trapper may get over 250 in a peak year and as few as half a dozen in a poor year.

TABLE 23
White Fox Take in the Tuktoyaktuk – Cape Parry Region

<u>Year</u>	<u>Take</u>
1950-51	590
1951-52	970
1952-53	244
1953-54	1034
1954-55	3396
1955-56	467
1956-57	201
1957-58	420
1958-59	822
1959-60	163
1960-61	473
1961-62	1417

Source: Fur Export Returns,
Territorial Division,
Department of Northern Affairs

On the whole, the white fox in the region is probably trapped to the limit. There may be one way of increasing the income from this activity. The Area Survey found that one-third to one-half of the trapper's catch was lost due to predation by other white foxes, coloured foxes, wolves and wolverines who came along to feast on the body of the trapped animal. This loss could be reduced were it possible for a trapper to visit his lines with greater frequency. Apart from his own inclination he is prevented from doing so chiefly by the never ending search for drift-wood used to heat his home, and the need to rest his dogs from both hauling this wood, and hauling camping and trapping gear on the line.

An examination of the income derived from trapping shows that the motorized men have the greatest financial return. Not only do they cover more country and set more traps in a single day but it is also easier for them to visit their lines oftener. The owner of the bombardier set 400 traps over a distance of 200 miles in eight days. By dog team this would have taken him almost three weeks.

Motor Toboggans

Reference has been made to the greater direct financial return that accrues to the motorized trapper as a result of being able to travel further afield and cover lines more often. During recent years motor toboggans have proved themselves and have become popular with the people who use them. But for want of capital, many more trappers would use these machines. It may be appropriate here to suggest that throughout the region publicity be given to the function and purpose of the Eskimo Loan Fund, and that good trappers be given assistance to buy motor toboggans through this scheme.

The use of motor toboggans, in addition to increasing range and efficiency, would free a trapper from having to fish for his dogs during summer, and thus allow him to take wage employment.

Coloured Fox

Black, Cross, Red and Silver foxes are trapped inland close to the timber line. Five hundred and ninety-seven Cross foxes and 935 Red foxes were traded in the region between 1940 and 1943. Coloured fox is not fashionable nowadays and the few taken are usually trapped by accident rather than intent. During the past 10 years the average number traded has been under ten. Values have ranged from \$2.00 to \$8.00, and at times traders were buying coloured fox only as a favour to their customers.

This resource is not being exploited at all. Much could be done to popularize this fur beginning on a local level by using it to the fullest extent in the newly established fur garment industry. There is no reason why a fox parka should not be as attractive as one made from muskrat. These furs could also be used extensively in the craft program.

Marten

The best marten habitat is the high rolling land found in the interior between the Kugaluk and the Anderson Rivers, and between the Horton and the Anderson Rivers in the area some 50 miles south of Franklin Bay.

The latter area, well within range of the Parry Peninsula, has never been trapped by the Parry Eskimos, but in the late 40's and early 50's a few attempts were made to travel inland to trap marten but none were caught and the expeditions often ended in near tragedy. Few of the Parry Eskimos have ever penetrated more than 25 miles into the interior, and are generally ignorant of the country beyond. In the olden days this territory was hunted by Indians from Great Bear Lake.

In the first half of the century white men trapped marten in the valley of the Anderson River, and when these men left the area the marten take declined so that for the year 1954-55 only seven marten were exported from the entire region. Over recent years the number of marten trapped by the people of Tuktoyaktuk have increased as illustrated in table 24.

TABLE 24
Marten Take by Tuktoyaktuk Trappers

<u>Year</u>	<u>No. of Marten Caught</u>
1957-58	137
1958-59	156
1959-60	687
1960-61	449
1961-62	330
1962-63	710 (Up to 31 December 1962)

Source: Fur Export Returns
Territorial Division,
Department of Northern Affairs

Only a few trappers have the initiative and outfits to enable them to reach the interior. In recent times these trappers have mostly been Metis, although Tuktoyaktuk's only Indian trapper also traps the region. Their activities and equipment have already been described.

In 1952, McEwen, of the Canadian Wildlife Service estimated that 1,500 – 2,000 square miles of Tuktoyaktuk's trapping area was good marten habitat which might be expected to contain a maximum of two marten per square mile.

Two years later, in 1954, an estimated 825 square miles of this habitat were badly burned and it is only recently that marten were beginning to venture back into the area.

The marten is one of the easiest animals to trap, and when an exhaustive method is used, entire areas can be easily over-trapped. The success of the trappers now in the bush will attract others and every encouragement should be given to the Eskimos to move into the area with their own resources.

With the exception of an intensive predator control program nothing further is recommended. Trappers spoken to said that they lost much fur to wolves, and that many areas were so heavily infested with these predators that it was unprofitable to place a trap.

Muskrat

A few muskrats breed in the area hunted over by the Parry people. Those taken are used locally and are insignificant in number.

After 1954 new trapping regulations excluded the Tuktoyaktuk residents from the rich muskrat grounds of the Mackenzie Delta but left them the lakes to the west, the lakes to the south-east of Eskimo Lakes and the numerous lakes of the interior.

The exclusion from the Delta and the beginning of DEW Line construction which coincided with a decline in fur prices were primarily responsible for the decline in the number of muskrat taken from the Tuktoyaktuk trapping area. The annual muskrat take since 1954 and the average price per pelt is set out in Table 25.

TABLE 25
Muskrat Take in Tuktoyaktuk Area

<u>Year</u>	<u>Muskrat Catch</u>	<u>Average Price per Pelt *1</u>
1954	5,972*2	.62
1955	861	.70
1956	398	.80
1957	84	.73
1958	247	.48
1959	Nil	.70
1960	Nil	.70
1961	92	.55
1962	476	.69

*1 Price is average paid in N.W.T.

*2 The last year Tuktoyaktuk residents trapped in the Mackenzie Delta.

Source: Fur Export Returns,
Territorial Division,
Department of Northern Affairs.

Four men took 476 muskrats in 1962, in the late 40's and early 50's the trappers from Stanton alone harvested 2,000 – 3,000 muskrats in the Anderson River area each year.

It is obvious that the use of the resource has almost been abandoned. Yet the demand for muskrat fur and flesh continues. The new fur garment industry in Tuktoyaktuk will require 6,000 – 8,000 pelts each year. In early 1961 muskrat carcasses were turned into food specialties, and the value of a raw carcass was often equal to that of the pelt.

The white fox season ends on April 15 but the muskrat season does not close until June 20. The same equipment is used to trap both species but to trap muskrats a man is required to stay out on his line as he must visit his traps every day.

The men cannot leave their families for a period of three or four weeks. Not only do they have personal dislike of such practices, but their families require someone to provide fuel and water.

It is, therefore, recommended that either the school year be adjusted to permit a trapper to take his family with him for four weeks, say April 20 to May 20, or that the children of the trappers involved be given leave. Alternatively, these children might be boarded out with relatives though this in effect subsidizes and defeats the purpose of the project.

For the first year no more than six trappers need take part in what would be a pilot project supported and supervised by the local game management officer.

This project might do much to restore lost pride to those men who are content to sit and let the women produce an income to feed the family.

It may be argued that the children will lose valuable schooling, however, it should not be overlooked that there will always be some who will prefer the life of a trapper, and that these should be given the opportunity to learn trapping skills before they are forgotten.

Beaver

For the ten years preceding 1953 an average of 21 beaver were taken annually in the Anderson River valley. Since 1953 no one has lived in the valley and no beaver have been taken. Surveys carried out since by the Game Management Service of the Territorial Division suggest that many of the beaver colonies have died out so that this animal no longer constitutes a resource.

Ermine

Ermine catches in recent years have averaged about fifty per annum. The pelts sell for .50c to \$1.00 and so make little impact on the economy, being used mainly for handicraft items.

Mink

Each year about a dozen mink stray into traps set for marten. Their pelts fetch from \$20.00 to \$30.00 and since mink are caught only by the few bush trappers they are considered as a bonus by them.

Lynx, Wolf, and Wolverine

Only a few lynx, wolves and wolverines are caught each year. The fur is used locally for trimming garments so little of it reaches the trading posts.

Parry Ground Squirrel

Ground squirrel are numerous in the region. Their burrows are to be seen everywhere along the coast in the sandy banks above the high-water mark.

The women at the head of Darnley Bay trap Ground Squirrels for their skins as well as their flesh. The animal is easily trapped and individuals have caught as many as 360 in a season.

The fur has a very attractive appearance. Its potential for use by Tuktoyaktuk's fur garment industry might be examined.

Rabbit

Once a welcome addition to the diet of the people living in the valley of the Anderson River the rabbit is found as far as the northern limit of trees on the Anderson and Horton Rivers.

Big Game

Caribou

Since it is difficult to distinguish an individual caribou from stray reindeer the hunting of caribou on the Reindeer Grazing Reserve (Map 1) is forbidden. To hunt caribou the trappers of Tuktoyaktuk must either travel 100 miles east, beyond the boundary of the reserve formed by the Anderson River, of an equal distance west across the Mackenzie River to the foot-hills of the Richardson Mountains.

Few trappers have the outfit to travel this far from home. There are, however, a few who hunt the caribou of the Yukon – Alaska herd. While little is known about the size of this herd biologists have indicated that it is not being over-utilized.

R.C.M.P. reports for the years 1958 to 1962 show that hunters from Tuktoyaktuk take relatively few caribou. Table 26 indicates the caribou kill over the past four years.

TABLE 26
Annual Kill of Caribou by Tuktoyaktuk Trappers

1958/59	47 caribou
1959/60	88 "
1960/61	103 "
1961/62	4 "

The bush trappers undoubtedly kill some caribou in the vicinity of Crossley Lakes; however, owing to the illegality of this take, the number of animals killed are never reported.

Caribou play a much more important role in the lives of the Parry Peninsula Eskimo whose seasonal activities are geared to the movement of the caribou.

According to Kelsall (1957) about 2,000 caribou winter along the head waters of the Anderson River. These animals belong to the Great Bear Herd, and migrate in spring along the Anderson River valley as far as the timber line where they divide with small bands turning north-west to reach the Arctic coast in the vicinity of Liverpool Bay, and larger bands swinging eastwards along the coast as far as Cape Lyon, and Northwards along the Parry Peninsula as far as Wright Bay. From mid-summer to early October these caribou are hunted casually along the Horton River by the trappers of Cape Bathurst, and intensively by the Cape Parry people. The importance of the take in the Cape Parry area is shown in the R.C.M.P. game returns listed in table 27.

TABLE 27
Annual Kill of Caribou in the Cape Parry Area

1956/57	150 caribou
1957/58	150 "
1958/59	150 "
1959/60	200 "
1960/61	65 "
1961/62	225 "

Though the accuracy of these figures may be questioned they do approximate the total kill of 162 caribou counted by the Area Survey for 1961/62. Because this herd winters in a region uninhabited by humans, and is harvested only by the people of Cape Parry, it is not thought that the annual kill is excessive. However, an estimated 30% of the total kill is fed to dogs, and an additional unknown quantity is stolen by predators from caches. Better utilization of Caribou meat might be achieved by feeding fish and seal rather than caribou to dogs.

Moose

No accurate figures for the number of moose taken over the years in the area are available. By all accounts substantial numbers are to be found in the interior on the same range as marten, and along the banks of creeks and rivers. The bush trappers took eight moose in the fall months of 1961. In this connection it is pointed out that because of their weight moose hides are frequently abandoned in the bush. This practice may decrease use of motor toboggans. A tanned moose hide sells for \$45.00 in the local Hudson's Bay Co. store.

The Area Survey party descending the Anderson River by outboard powered boat in 1962 observed one moose every ten miles. The animals showed little fear and continued to browse.

It seems that a large unharvested population of moose exists in this area, and, judging by reports, along the valley of the Horton River. This resource might be exploited by use of aircraft to lift organized hunting parties into the country.

Muskox

Muskox were a source of food in the Darnley Bay area in the time of the whalers. The few that survived this exploitation are now strictly protected. A herd of between 20 and 30 strong has been reported to feed in the hills facing Darnley Bay. This herd might be considered as a potential tourist attraction.

Polar Bear

Polar bears are taken near Cape Bathurst and Cape Parry. In early 1962 a hunter from Tuktoyaktuk killed one nursing female. He obtained \$350.00 for the live cub from a Vancouver zoo, and sold its mother for \$90.00.

Until the beginning of the DEW Line, polar bear skins sold for around \$40.00, in recent years DEW Line personnel and tourists have paid from \$100.00 to \$125.00 for a single skin, or an average price of \$10.00 per foot of skin.

In the winter of 1961-62 the RCMP, misinterpreting an ordinance in respect of polar bear, warned the Eskimos at Cape Parry that hunting these animals was illegal. Consequently some Eskimos were frightened into selling the skins they already possessed for about \$30.00.

Polar bears are more important to the people of the Parry Peninsula than to the people at Tuktoyaktuk. Mainly because the bears are found within a short distance of Cape Parry, and secondly, the large DEW Line site provides a ready market for bear skins. Polar bear may be hunted anytime to supplement food and cash when fox is scarce. Polar bears are either hunted down by dog team, or killed by a set gun that the bear triggers when it attempts to lift the bait.

During 1961-62 hunters from Cape Parry killed 15 polar bears on three hunting expeditions of three to four days duration. Hunting was carried out to the east, north and west of Cape Parry.

During the same winter the family at Cape Bathurst accounted for six polar bears and would have taken more had they not been warned by the RCMP. Table 28 lists the polar bear take over the past 10 years.

Barren Ground Grizzly Bear

These animals though widely distributed are protected but since they are great robbers and work destruction on cabins they break into, several are shot each year. Since no hunter has any desire to get involved with enforcement officers the actual number taken is seldom declared.

In 1962 the Area Survey found that one hunter had taken seven bears in the previous 12 months. The Eskimos and their dogs eat the flesh, the pelts are used as sleeping rugs.

TABLE 28
Polar Bear Take

<u>Year</u>	<u>Tuktoyaktuk</u>	<u>Cape Parry</u>
1952-53	21	No record
1953-54	3	" "
1954-55	12	1
1955-56	5	Nil
1956-57	4	3
1957-58	24	Nil
1958-59	4	11
1959-60	5	24
1960-61	4	17
1961-62	9	15

Source: Fur Export Returns,
Territorial Division,
Department of Northern Affairs

Were it legally possible the skins might be sold to the tourist trade at a fair price. Barren ground grizzly, after all, is as exotic as polar bear. Bear claws are in demand by jewellers, and the handicraft trade was paying \$1.00 for a single claw. Limited sport hunting of barren ground grizzly bear should be investigated

Reindeer

For the purpose of establishing a self-sustained Eskimo industry 2,370 reindeer were brought from Alaska to the Mackenzie Delta in 1035. A reserve of 6,000 square miles, subsequently enlarged to 17,900 square miles, was set aside as a reindeer grazing reserve. (Map 1)

The activities of the reindeer industry are co-ordinated at the Reindeer Depot located on the east branch of the Mackenzie River, 60 miles south-west of Tuktoyaktuk and 28 miles down stream from Inuvik. While the operation of the Reindeer Depot and its inhabitants are not discussed in this report, the reindeer herds in the area are a valuable resource and will be discussed in this light.

Over the past 27 years more than 13,000 reindeer have been slaughtered for meat and skins. The meat is sold locally to Government agencies, Missions, and private persons. The bulk of the skins are distributed to the Eskimos in the eastern Arctic.

Three separate herds totalling 7,634 reindeer were maintained in the summer of 1962. Of these, two were Government owned and two Eskimos were the co-owners of the other herd.

The two Government herds, "A" and "B" numbered 2,718 and 2,895 animals respectively. "A" herd had its summer pasture on the coast close to McKinley Bay, it wintered on the south side of Eskimo Lake in the vicinity of the Minor River. "B" herd summered on Richards Islands, and wintered inland on the east side of the Mackenzie River between Holmes Creek and Noell Lake. Five herders, working for wages, attend each herd.

Between 70 and 80 Eskimo men, women and children live at the Reindeer Depot and depend on the reindeer industry for their income. Nineteen others, mentioned in chapter VII, live off the proceeds that accrue from Native herd No. 4.

High fur prices of the 1930's and early 40's and the post-war increase in the wage employment offered on construction projects are, in part, responsible for the failure to establish a self-sustaining Eskimo

operated reindeer industry. Very few Eskimos have been attracted to reindeer herding during the last five years.

The core of herders now with the Government herds have several years of experience each. They are loyal and conscientious, and look upon reindeer herding as wage employment. Their annual wages amount to between four and five thousand dollars each, and, in addition, they receive housing, electricity, fuel and water at a nominal charge. High operating costs militate against an economic operation.

Over the years several Eskimos were trained in reindeer herding and then set up with their own herds. All of these herds, with the exception of one unit, were eventually returned to the Government. One of the first Eskimo managed herds was taken back after the Eskimo owners and their families were lost in a shipwreck off Cape Dalhousie. The other herds were repossessed when their Eskimo managers were drawn elsewhere by trapping or job opportunities.

The surviving Native herd is managed by two Victoria Island Eskimos who were recruited for the industry in the 1940's. As these men trade into Tuktoyaktuk, and hire herding assistants from the settlement, their operation makes a more noticeable impact on the local economy.

Although their herding technique and management leaves much to be desired, and continual encouragement and supervision by the superintendent of the Reindeer Depot is required, they have demonstrated that reindeer husbandry is economically possible.

Native Herd No. 4 was created March 1954 when 1,300 reindeer were separated from the Government herd. During the nine years of its existence this unit has produced 1,550 animals for sale, and another 560 animals for consumption by the herders and their families. During the 1962 round-up this herd contained 2,021 reindeer and a slaughter of 200 was planned.

The price of reindeer meat was increased from 35c to 50c a pound in 1960. The average reindeer carcass dresses out at 115 pounds therefore slaughter of 200 animals will yield \$11,500 for meat, \$1,000 for hides, and another \$300 for heart, liver, tongues and marrow bones.

The practice has been to sell reindeer by the carcass to any customer. Unfortunately, the increase in price put reindeer beyond the range of many people who do not have \$50 to buy a carcass. Thus the Hudson's Bay Company buys the bulk of the meat in Tuktoyaktuk and retails it at 65c to 82c a pound, depending on the cut, and the meat is removed still further beyond what the Eskimo in the lower income group can afford to pay. In this connection it would be beneficial if the H.B.C. would accept a lower mark up. This might mean that the herders would deliver their meat already cut up.

It is not within the scope of this report to propose the future course of the reindeer industry. However, if the aim is to develop and exploit the region's natural resources, then we cannot omit the reindeer which, in an otherwise empty land, convert useless lichens into meat. As the Eskimo population increases and the economy swings yet further away from hunting and trapping to wage employment, reindeer meat will play an important role in feeding the humans of the area.

It is recommended that every effort be made to keep the reindeer herds intact, to encourage the development of this industry and to maintain the interest of the men who tend them.

To assist the reindeer operation it is suggested that the summer pasture be extended to the Cape Bathurst Peninsula. The reason for this is that the reindeer herds at Toker Point and Atkinson Point are not far enough apart to prevent their intermingling. On the Tuktoyaktuk Peninsula good summer pasture with access to the coast is not abundant. The summer range now being used by the Government herd would be better reserved for the Native herd, and the Government herd, a potential study unit, would be effectively isolated on Cape Bathurst.

This suggestion is not new, but in the past problems of supply and communication rendered the establishment of a reindeer herd on Cape Bathurst difficult. If, as suggested later, a seasonal fishery is

started at Baillie Island then the logistics of a reindeer operation on Cape Bathurst become relatively simple. The operation would be complementary to the fishing project. Women, children and supplies would be transported by the M.V. Banksland. Unexploited land would be used, and the influx of people would do much to revive the old settlement.

More employment will be generated by the demand for logs and lumber required for corrals, and possibly for housing. Trees might be felled on the banks of the Anderson River by the men trapping muskrats in the vicinity. Logs could be floated to the mouth of the Anderson and taken from there by schooner.

Game Birds

Eider ducks nest on some of the sand spits and islands in the region but never in great colonies as in the eastern Arctic. Though some down is saved for clothing, ducks and geese are valued for the food they provide.

Few Eskimos keep any record of the number of birds they take throughout the year. Hunting licence returns, which vary from guesses to estimates, show that in an average year hunters at Tuktoyaktuk take 1,700 ptarmigan, 600 geese, and 500 ducks. The number of swans taken is not known, but Eskimos report that, in the immediate vicinity of Tuktoyaktuk, these birds are becoming scarce.

Ducks and geese are taken in spring on their way north when the birds crowd on to small areas of open water, and again in late August and September during their return migration.

Ptarmigan, an important part of the food of man and the fur bearing carnivores, is generally always available and especially plentiful for short periods in spring and again before freeze-up when it is possible for a good hunter to get up to 100 birds a day.

People on the Parry Peninsula take few geese in fall because this activity conflicts with the hunting of caribou which are then bunching in the hills for the migration south. Few Hunters take advantage of the geese that each fall flock in large numbers in the estuary of the unnamed river by Maitland Point, and at the mouth of the Mason River. Although game birds as a food resource might be exploited better by organized hunting, it must be remembered that taking of ducks and geese is governed by international treaty, and some years ducks and geese fly south before the opening of the legal season.

Fish

Tuktoyaktuk Area

Between 60 and 75 tons of lake herring, whitefish, and inconnu are caught annually by the people of Tuktoyaktuk. The bulk of the catch is taken in summer and fall in the sheltered waters of the Harbour.

Whitefish and inconnu are caught in gill nets measuring 30 feet by 6 feet and are of 3½" or 4½" mesh. Fishing starts at the first open water and continues until freeze-up. Most, but not all, families keep a net in the water all season and average a catch of 10 to 14 fish a day. Some of this fish is split and dried and some is also smoked cured. The remainder is fed to the dogs or frozen and stored in the communal frost cellar for winter use.

Forty to fifty tons of lake herring are taken by means of sweep nets during the four weeks before freeze-up. This fish is used for dog food and is stored in 45 gallon oil drums or in covered pits dug into the ground.

When fishing with a sweep net the degree of success varies from day to day. Lake herring are said to travel along the coast in big schools, while stormy weather means a big harvest, calm days or off-shore winds bring few herring into the Harbour. In some years the herring fishery has been known to fail.

Fisheries Research Board officials have indicated that the fish population in Tuktoyaktuk Harbour could not stand much additional pressure, and have therefore ruled out the possibility of a commercial fishery.

Along the coast, beyond the Harbour, summer fishing is carried out six to eight miles from the settlement by two families. At Toker Point, fish are taken by the two reindeer owning families and at Atkinson Point the men of the Government reindeer herd put up two and a half tons of herring for dog food.

In the fall, at the mouth of the Kugaluk River, off Liverpool Bay, two bush trappers put up four to five tons of whitefish, pike and suckers, and the other bush trapper catches two tons of whitefish and pike in the lakes close to his trap line.

Little fishing is done in the area during winter time and then only from sheer necessity when stocks are depleted. Those who fish find a ready market for their catch. Trout may be caught in a number of lakes on both sides of Liverpool Bay and in the Eskimo Lakes as well. Whitefish are also present in many lakes of the area.

During the winter of 1962-63 the Industrial Division of the Department of Northern Affairs received an eight and a half ton quota for whitefish, inconnu and lake trout for a winter fishing project in the area. While this is a beginning it is estimated that the Eskimo Lakes system is capable of yielding 25 tons annually.

In this connection a survey of local and regional markets for fish from this district and the Mackenzie Delta is urgently required. If the needs of the local people can be met, then an investigation of the DEW Line as a market for fish should be undertaken.

While Tuktoyaktuk Harbour is intensively fished, and some lakes in the vicinity are fished casually two rich and accessible fishing grounds in the region are not touched at all. The first is the Baillie Island – Cape Bathurst area where large numbers of herring may be caught in August and September by use of traps or sweep nets. The Fisheries Research Board will allow a 50 ton quota for Blue or California herring (*Clupea pallasii*) and a ten ton quota for Lake Herring. It is recommended that a seasonal fishery be set up to salt and pack Blue Herring for further processing.

The second is the Wood Bay – Nicholson Peninsula area at the mouth of the Anderson River. Sixty pound inconnu have been taken here, and 30 pounders are not uncommon. The Fisheries Research Board will agree to a seven ton quota of whitefish and inconnu. A small fishing project at this site would tie in with the operation at Baillie Islands, 50 miles to the north.

The lakes in the old channel of the Horton River are ideally situated for a small winter fishing project to supply the DEW Line site at the mouth of the Horton River and on the Nicholson Peninsula. In the days of the settlement at Baillie Islands¹ these lakes used to yield annually 1,500 lake herring, trout and jumbo whitefish.

The following table is a summary of fish potential and utilization in the Tuktoyaktuk to Baillie Islands area. The present take represents an accurate estimate. The potential deals only with areas for which resource harvesting projects are proposed. Very little is known about the fish population of the lakes in the hinterland. Fisheries Research Board authorities estimate that lakes containing trout are, on the average, capable of producing a sustained annual yield of half a pound per acre of water surface. From the figures in Table 29 it is evident that the trout resource is not being adequately utilized.

¹Local Eskimos refer to The Cape Bathurst settlement as Baillie Islands.

TABLE 29
Fish Potential and Utilization – Tuktoyaktuk

<u>Species</u>	<u>Potential</u>	<u>Utilization</u>	<u>Location</u>
Lake Herring	90,000 lbs	90,000 lbs	Tuktoyaktuk
Lake Herring	10,000	10,000	Toker and Atkinson
Lake Herring	20,000	Nil	Baillie Islands
Blue Herring	100,000	Nil	Baillie Islands
Whitefish & Inconnu	20,000	20,000	Tuktoyaktuk
Whitefish & Inconnu (Incl. Pike & Sucker)	50,000 (all species)	12,000	Eskimo Lakes system
Trout	1/2 lb per acre	4,000	Eskimo Lakes & other lakes in area
Total	250,000 lbs	135,000 lbs	

Cape Parry Area

The total amount of fish used in the area is not known but it is certain that the fish resource is not being adequately utilized. The Area Survey found the Eskimo in the area to be woefully short of fish nets. The Cape Parry Eskimos do not set nets in either the lakes, or the sea close to the settlement. The lakes harbour only very small lake trout, and the sea appears to bring forth nothing but two species of cod, known by the Eskimos as Rock cod and Tom cod. The Eskimos consider this fish only good enough for dog food and catch them with a line and hook. One hundred may be hooked in three hours jigging. Tom cod (saffron cod) seem to be available in large quantities, an estimated 8,000 weighing an average of 1 lb. are caught for dog food in the summer months. Stefansson in *"My Life With The Eskimo"* wrote: "...there is a bight behind Point Stivens where Tom cod can be hooked in unbelievable numbers at almost anytime in the winter. We each hauled out several hundred Tom cod a day". Eighteen years later, in 1929, an RCMP corporal on a winter patrol recorded that two families at Tom Cod Bay were getting all the cod they could use and were catching as many as a thousand a day.

Uses for this cod should be explored by the Industrial Division's Food Specialist. Although Eskimos throw this fish to their dogs, the food specialist in 1961, when working with another group of Eskimos, found that they relished the smoke-cured Tom cod. This fish might lend itself to development as a speciality for southern markets.

Arctic char are found along both the east and west side of Parry Peninsula as far north as 69°45', but no heavy run has been reported. A run of Arctic char does occur in the Hornaday River. In the spring, before the ice moves out, char and mountain whitefish are caught in the tide cracks. In the latter part of August, when the char return to the river, several thousand are put up for human as well as for dog food.

Since this char winters in deep holes in the river close to the mouth it is suggested that a small scale (2,000 pound char) winter fishery be started. This project will require no capital equipment other than fish nets. The char would be sold to the caterers at the DEW Line site and delivered there by means of motor toboggans or dog sleds.

The lakes south of latitude 69° 45' hold whitefish, and trout weighing as much as 30 pounds, while some of these lakes are now fished, many more might be exploited and thus provide fish for dog food other than char.

Little use is made at present of the reported heavy runs of Blue Herring that occur at the head of Darnley Bay from early September until freeze-up. If the Baillie Islands fishery proves a success, consideration should be given to starting a similar project in the Darnley Bay area.

In summary, too little is known about the fish potential in this area. Until Fisheries Research Board has carried out thorough investigations it can only be said that the fish resource can be harvested more intensively, but that the degree of utilization cannot be determined until after a period of controlled but more intensive fishing.

For the time being it is recommended that in addition to the present catch the take of char, lake trout, and whitefish be increased by 2,000 lbs for each species.

It is also recommended that the Tom cod, Blue and Lake Herring in the area be made the subject of further study.

Sea Mammals

Seals

The ringed seal is the most common in the region. Bearded seal appear to be more local in distribution but are plentiful in locations such as Baillie Islands and off the Nicholson Peninsula sand spit where as many as 50 bearded seal have been taken in a single season. Harbour seals and harp seals are rare.

In winter ringed seal may be hunted in open water along the floe-edge of the Beaufort Sea, 15 to 20 miles from Tuktoyaktuk, and especially off Warren and Atkinson Points. Ringed seal are readily taken in the open waters off Cape Bathurst.

At Cape Parry, when strong winds break up the sea ice seals, are taken close by.

The eastern Eskimos at Cape Parry take seals under the ice by means of barbed hooks frozen into the seal's breathing holes. This method has been condemned by some as unnecessarily barbaric and cruel.

In spring and early summer, seals are present in great numbers in Hutchinson Bay, McKinley Bay, Liverpool Bay, Baillie Islands, Franklin Bay and Darnley Bay. In June 1911, Stefansson recorded "...the common seal never saw anywhere in such numbers as on Darnley Bay. . . . I counted over 400 within a radius of three miles or so."

The local Hudson's Bay Company posts did not buy any sealskins for many years, and, as a result, the Eskimos of tuktoyaktuk took little interest in sealing. During the year five hunters took 25 seals and 11 of that number were killed by a trapper who travels along his trap line by bombardier. Four seals were taken on the Eskimo Lakes — Liverpool Bay system by a hunter out for a week-end excursion with his young son. The reindeer herders in the camps along the coast took about a dozen seals. The group at Cape Bathurst depends largely on seal for dog food and puts up about 125 seals annually.

Out of the 150 seals taken between Tuktoyaktuk and Cape Bathurst, no more than two dozen skins were saved. It is obvious that the seal resource, when not being ignored, is being wasted.

During late 1962 there were indications that the traders were taking an interest in sealskins and stimulating seal hunting in the area.

At Cape Parry seals are an important part of the food supply for man and dog. Between 200 and 300 ringed seals, and about ten bearded seals have been taken annually in recent years. During 1961/62, 100 skins were saved for the Cape Parry handicrafts project.

Officials of the Fisheries Research Board have suggested that the ringed seal population in the region is capable of sustaining an annual yield of at least 1,000 animals. The present harvest comes nowhere near that figure, and is actually lower now than it was 20 years ago when a white trapper in the area used to catch as many as 200 seals a season by means of a seal net.

It is recommended that sealing be organized at Cape Parry and Baillie Islands, and that sealing be extended to Liverpool Bay and Atkinson Point after the Fisheries Research Board has carried out a census of the seal population in these locations.

Sealing at Baillie Islands presents no problem since it can be carried out by the group engaged in the herring fishery.

The seal potential in Franklin and Darnley Bay is as good as, or even better than, that of Baillie Islands.

However, the people of Cape Parry are so lacking in equipment and leadership that these deficiencies must be overcome before sealing on a larger scale can begin.

Equipment in the form of whale-boats and seal nets can be made available through the Eskimo Loan Fund. Dynamic leadership must be provided by a man who understands the Eskimos, and is capable of organizing the other projects planned for the area. This man can either be a contract employee hired locally, or a civil servant brought in from the south.

Table 30 sets out the seal potential and utilization in the region.

TABLE 30
Seal Potential & Utilization in the Region

Species	Potential	Utilization	Location
Ringed Seal	500	150	Tuktoyaktuk to Baillie Islands
Ringed Seal	500	250	Parry Peninsula
Bearded Seal	50	4	Tuktoyaktuk to Baillie Islands
Bearded Seal	50	10	Parry Peninsula

Beluga Whales

In an average year 30 beluga whales are taken by the people of Tuktoyaktuk. Under the present system the owners of seaworthy boats sail forth during fair weather in the direction of Hendrickson Island, 20 miles away, hunt down one or two whales, and then return to the settlement to process the catch. During the one month's whaling season these men generally satisfy their requirements, and those of a few others whom they take along to help. However, the average family can easily dispose of two whales. The needs of the settlement as a whole are not satisfied.

It is proposed that whale hunting be organized to allow all boats to be fully utilized during the clement weather of the short whaling season.

This might be achieved by the use of a schooner as a mother ship. This schooner would have sufficient power to tow a number of whales to the settlement where women would be standing by to process the whales. The whale-boats would remain at sea and continue to hunt.

If the whalers wished to process their own catch, then their boat on arrival at the settlement should be manned by a fresh crew, and immediately turn around to sea. The Department of Northern Affairs might provide technical assistance to keep boat motors running.

Thirty to 50 per cent of the whales killed by shooting are lost. The use of whale nets would be encouraged if their success were proved to the Eskimos who also claim that a drowned whale has an ill taste. Beluga whales frequent the channel between Baillie Islands and Cape Bathurst. This site might be considered for whale netting.

Under the present system of whale hunting it sometimes happens that more whales are captured than can be towed home. In this event the whales are taken to Hendrickson Island, where the blubber is flensed from the carcass, the remains are left to the gulls, and the whale chase continues.

A frost cellar dug on Hendrickson Island as part of a winter works program would save this whale meat for winter use by trappers whose lines run west from Tuktoyaktuk.

Aircraft pilots have reported large schools of belugas from Herschel Island to Cape Parry. The equipment, which is the key to marine harvesting, is lacking, and as long as the deficiency of suitable boats persists, whale and seal will not be taken in the quantities that are available.

As Table 31 shows, Fisheries Research Board officials have indicated that the whale catch in the region can be doubled without fear of over-utilization.

TABLE 31
Beluga Potential and Utilization in the Region

Location	Potential of Region	Utilization		
		1954	1959	1962
Shingle Point				1
Kendall Island				33
Whitefish Stn. & Kidluit Bay				11
Tuktoyaktuk				30
Cape Parry		Nil	Nil	Nil
Total	500	206	145	75

Bowhead Whale

From 1890 to 1910 bowhead whales were hunted by commercial whalers in the Beaufort Sea between Herschel and Cape Parry. Cheap substitutes for whale bone doomed the industry but saved the bowhead from extermination.

Within recent years bowheads have been reliably reported in sight of land at Atkinson Point, Baillie Islands and Cape Parry. Eskimos say that they have seen bowheads enter Langton Bay and Argo Bay in an attempt to rub off barnacles, and in old years the stranded carcass of a bowhead whale has fed man, dog and fox on the beaches of Parry Peninsula.

A study should be undertaken by a competent authority to determine the feasibility of harvesting bowhead whales. Before the coming of the white man Eskimos used to harpoon bowheads from the floe-edge, or even from kayaks. The equipment necessary today might be a dart-gun to place one of the paralysing but non-toxic drugs into the whale, and a boat powerful enough to drag the huge animal to shore.

Forests

The greater part of the region surveyed lies beyond the limit of trees, but along the Kugaluk, Anderson and Horton rivers the tree line bulges northwards into the tundra as far as latitude 69° 25' on the Kugaluk, and latitude 69° 25' on the Anderson and Horton rivers. White spruce is the only tree of commercial value found, and away from the river valleys and sheltered locations these are thinly scattered, stunted and of sharp taper.

No detailed information was obtained of the tree growth along the Kugaluk. This river was seen from the air. Trees were confined to the steep banks of the river and appeared to average 20 feet in height. While

this timber provides trappers in the area with fuel and building material, the commercial value of the stands is nil.

No field investigations were carried out by the Area Survey along the Horton River, but judging from reports and air photographs, the immediate banks of this deep river are fairly well wooded to within 50 miles of the coast. This timber has been used for fuel by the occasional hunter in the area, but its commercial value for practical purposes can be discounted. The economic failure of any commercial timber operation can be predicted by the absence of settlements and markets in the vicinity, combined with the shallow water at the river's mouth and an absolute lack of shelter along the entire west coast of Franklin Bay.

A timber reconnaissance was carried out by the Area Survey along the Anderson River from the 128th meridian west to its mouth. Although a belt of spruce extends for several miles inland from the upper Anderson River, this belt rapidly narrows to a fringe along the river as it progresses northwards, and timber is eventually found into the Anderson.

The reconnaissance was confined to this fringe which, in any case, contained the biggest trees. The banks of the Anderson at 169 W are fairly densely wooded with white spruce 10 to 15 apart, 30 to 35 feet high, and average 4 to 6 inches in diameter five feet above the ground. Towards the limit of spruce this forest cover diminishes in size and density. An appraisal by the Department of Forestry of the data collected on this reconnaissance is contained in the appendix.

To supply building logs and fuel for projects on Nicholson Peninsula and Cape Bathurst a domestic operation along the Anderson River might prove feasible. Logs could easily be rafted down the river at high water. When the mission operated at Stanton, it used to cut and bring down twelve cords of firewood every year. The Eskimo cabins at that settlement were also built of Anderson River logs.

Non-Renewable Resources

Coal

The coal in this area has been used by trappers and the Roman Catholic Mission at Paulatuk for many years. Mackay (1958 p. 23) describes the coal deposits as follows:

"Coal, primarily in the form of lignite outcrops in a belt extending from the east side of Darnley Bay south-west to Anderson River. Trappers and the Roman Catholic Mission at Paulatuk have used the lignite as a fuel for many years, digging from both open pits and underground.

Lignite is exposed along the sea cliffs at the north-east side of the Hornaday River Delta and in the valleys of Rummy Creek, George Creek and Hornaday River near their common junctions. A seam of torbanite up to one foot six is exposed near the junction of Rummy Creek and Hornaday River. On distillation, a specimen produced 94 gallons of petroleum to the short ton. Thin beds of coal outcrop in the south-west corner of Darnley bay, in the hills near Langton Bay, and along the Horton River and affluents south of Langton Bay."

In 1962 only one deposit, known as the coal mine, was being used. This "Mine", located on the south shore of Darnley Bay between the Hornaday and Brock Rivers, is an excavation at the bottom of a 16 foot shaft measuring 30 feet by 14 feet by 4 feet. In the winter of 1961/62 two families living close by turned a ton of coal a month.

The coal is too soft and crumbly for transportation to Cape Parry but despite its low quality it nevertheless is the only fuel available and will assume greater significance with the move of people into the area as a result of the projects proposed.

It is suggested that the regional mining inspector be asked to visit this mine in spring to inspect the safety of the workings, and to recommend how the coal might be extracted more easily and efficiently.

A projects officer with experience in coal mining would be a suitable person to implement any recommendations that one made.

Soapstone

There is a demand for soapstone in the western Arctic; the Inuvik Rehabilitation Centre alone can use two thousand pounds annually and would pay 25c a pound.

Hunters at Cape Parry know a soapstone deposit at Clinton Point, 100 miles to the east. With a view to quarrying this deposit, it is suggested that a white trapper, who lives in the vicinity, be asked to send samples of this soapstone for appraisal to Inuvik. If the stone is of good quality, it can be shipped from Clinton Point by Northern Transportation's Sealift.

Tourism as a Resource

Since Tuktoyaktuk Traders expect to operate a tourist camp by the summer of 1963, this section will confine itself to a resume of tourist attractions in the area.

Tuktoyaktuk is an intriguing name. Translated into English it means "It looks Like A Caribou". This and the fact that it is the last settlement on the Mackenzie transportation system, and the only settlement on this system to have a truly Arctic environment, will draw many tourists.

There are other attractions in the area. Lake Trout fishing is available but does not compare with the fishing at Great Bear and Great Slave Lakes. In summer there is beluga whaling for about a month, from late June until late July. The annual reindeer round-up at Richards Island provides the only opportunity in Canada to see thousands of these remarkable animals being handled by Eskimo "Cowboys". The average tourist is always hungry. A small section in the corral cook-house to serve reindeer soup and steak to tourists would prove profitable.

Aircraft excursions might be arranged to spot bowhead whales, or the Alaska-Yukon caribou herd that ranges in the Yukon not far from the coast. In fall, tourists may fly over the islands at the north end of the Mackenzie Delta to see thousands of geese gathering for their flight south.

Tourists with special interests might be shown the local, large, volcano-like iced filled pingos or, further afield, the densely populated nesting grounds of ducks and geese in the delta of the Anderson River.

In spring, on the Eskimo Lakes, the adventurous tourist might hunt seal, or "Jigg" through the ice for trout. There is no dearth in the area of English speaking men, who might act as guides if given some instruction.

Cape Parry

Opportunities for tourism may be best dealt with in two sections. First, there is the captive market of 200 transient men employed at the DEW Line site. The DEW Line operators should be approached to allow the employees off base for the sake of recreation and morale. Day trips, under the direction of a project officer, would be laid on by the Cape Parry Eskimos for DEW Line staff who wished to hunt seal on the sea ice, or in summer, just wished to go fishing, or sight seeing to some of the arches, caves and stacks that have been formed by wave action along the limestone cliffs of Parry Peninsula.

The second group of tourists to consider are the many young, and often single, school teachers, nurses, and other Government personnel in Inuvik.

These people have both time and money for which they can be offered these attractions: the spectacular Parry Peninsula limestone formations, the canyons and rapids of the Hornaday River, the Smoking Mountains of Cape Bathurst belching forth steam and sulphurous smoke which covers the mountain slopes with red, yellow, brown and white ash. The area also offers an opportunity to see and

perhaps photograph caribou, and the rare muskox and barrenland grizzly bear. There is also good seal hunting and angling for trout and arctic char. Accommodation and cooking facilities can be arranged in the empty Mission building at Paulatuk. As is the case in the Tuktoyaktuk area, Cape Parry Eskimos generally have a good command of the English language.

Chapter IX

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The foregoing chapters have shown that the future of the people in the Tuktoyaktuk, Cape Parry region need not be the bleak and hopeless existence predicted by those who see no alternative but ever increasing payments of social assistance to a growing Eskimo population alienated from a land depleted of the resources that once sustained it.

It is true that the Eskimos have moved off the land to concentrate in the settlements, and that this shift has led to reduced use of the country's basic resources.

This move was inevitable and while it has caused some social and economic distress it has also broadened the opportunities for people to earn a livelihood, it has brought an element of choice into their lives which did not previously exist, and, above all, it has laid the basis of an educational process which will better equip the people to take full advantage of their citizenship.

The future points to a diversified economy. As the population expands so will the importance of wage employment, private enterprise and the development of local specialties. With the growth of a more wage oriented economy, new opportunities will develop for people interested in harvesting and processing local food for sale to those in wage employment. This will undoubtedly become an important trend as the economy develops.

The key to the human and economic development of the region lies above all in education and training of children and adults alike. Teaching to read and write, to understand health and hygiene, the value of money, conservation, and punctuality, the better handling of equipment, fur and resources in general are necessary for human and economic development.

This study has concerned itself with the ways and means whereby the standard of living of the local people may be improved. It has shown that many opportunities exist, and how these might be developed.

The following is a summary of the recommendations made in the body of the report. It is divided into two sections; recommendations for action and recommendations for research.

Recommendations for Action

1. That the Northern Transportation Company Limited at its Tuktoyaktuk depot employ local Eskimos for some of the jobs now being performed by men brought in from the south.
2. That the Department of Northern Affairs employ Eskimos on tasks for which they have received vocational training, and persuade other Government departments and private employers to do likewise.
3. That handicrafts production be expanded under the guidance of a craft officer. That artifacts and other items in the \$1.00-2.00 range be produced. That low cost raw fur, such as red fox, be displayed for sale along with handicrafts.
4. That the purpose and function of the Eskimo Loan Fund be given publicity throughout the region. That motor toboggans be made available to good trappers through this fund.
5. That help be given to a capable person in Tuktoyaktuk to set up a motor toboggan and outboard motor repair shop.

6. That immediate use be made of CBC's radio station in Inuvik as a medium of adult education.
7. That the Department of Northern Affairs, using a revolving fund, buy and stock pile drift-wood, for sale or issue during winter.
8. That low cost housing be erected at the head of Darnley Bay to facilitate exploitation of resources in that area.
9. That a mining inspector make recommendations as to how the coal at the head of Darnley Bay may be extracted safely and more efficiently.
10. That the DEW Line catering authorities be requested to buy local fish in winter time.
11. That local fish be made part of the relief ration issued at Tuktoyaktuk.
12. That the DEW Line authorities be requested to permit their employees to participate under supervision in seal hunts and fishing expeditions organized for them on a tourist basis.

That the potential of the tourist trade in Inuvik be investigated.

13. That using aircraft to reach remote areas organized moose hunting be encouraged along the Anderson and Horton Rivers.
14. That beluga whale hunting in Tuktoyaktuk be organized to allow the maximum use of available boats.
15. That to conserve surplus whale meat a frost cellar be dug on Hendrickson Island.
16. That sealing on a large scale be organized in the Cape Parry area to supply marketable sealskins, and meat for human food and dog food.
17. That a large scale resources harvesting project be set up at Baillie Island to take Blue herring, beluga whales, and seals.
18. That the reindeer summer range be extended to Cape Bathurst.
19. That the reindeer meat supplied by the Eskimo herd to the Hudson's Bay Company in Tuktoyaktuk be delivered cut up by the suppliers to enable the Hudson's Bay Company to sell this meat at a price closer to what the local people can afford.
20. That muskrat trapping be encouraged in the Tuktoyaktuk area by providing bombardier transportation to the trap lines.
21. That an active predator control program be carried out in the country between the Anderson, Wolverine and Kugaluk Rivers.
22. That a local market be created for coloured fox and ground squirrel by using this fur in Tuktoyaktuk's fur garment industry.

Recommendations for Research

1. That the feasibility of taking bowhead whales be studied.
2. That a census of the seal population in the region be undertaken by the Fisheries Research Board.
3. That a survey of fish requirements and markets in the region, and beyond, be carried out.

4. That a study be made by the Fisheries Research Board of the potentials of saffron cod and Blue herring in the Franklin and Darnley Bay area.
5. That the question of limited sport hunting of Barren Ground Grizzly bears be examined by the Canadian Wildlife Service.
6. That the soapstone deposit at Clinton Point be sampled and assessed with a view to quarrying the deposit.
7. That the economics and feasibility of a small scale tannery for Cape Parry be worked out.

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APPENDIX A

Details of Housing Construction and Number of Occupants

Tuktoyaktuk 1962

House No.	Occupant	No. of Rooms	Size	Construction Material	Condition	Fuel	Year Built	Builder	Owner	Adults	Children
1	Special Con. RCMP	4	18 x 26	Frame	Fair	Oil	1950	RCMP	RCMP	2c	3c
2	P. Ettagiak	1	14 x 16	Log	Poor	Oil		Esk.	—	2	9
		Porch	14 x 7								
3	S. Anikina	1	8 x 10	Tent	Fair	Wood			occup.	3	2
4	I. Silastiak	1	12 x 14	Log	Fair	Wood	1960	NANR	NANR	2	5
		Porch	6 x 8	Lumber							
5	R. Mangelana	2	12 x 28	Frame &	Fair	Oil	1942	RC Mission		4	4
		Porch	6 x 8	Plywood							
6	W. Nasugaluak	1	10 x 12	Tent	Good	Wood			occup.	1	
7	E. Kotokak	3	14 x 28	Frame	Fair	Oil	1942	RC Mission		4	2
		Porch	8 x 8	Lumber							
8	Sarah Nasugaluak	1	10 x 12	Frame	Fair	Oil		RC Mission		2	
		Porch	5 x 4	Lumber							
9	M. Noksana	2	16 x 24	Log &	Fair	Oil & Wood	1941	Esk.	occup.	2	5
		Porch	6 x 14	Plywood							
10	T. Umoak	2	16 x 20	Frame	Good	Oil & Wood	1937	Anglic. Mission	occup.	2	1
		Porch	2 x 6	Plywood							
11	J. Norberg	4	16 x 32	Frame	Fair	Oil & Wood	1956	Esk.	occup.	2	7
12	R. Chieksi	1	12 x 14	Scrap &	Poor	Wood	1956	Esk.	occup.	2	3
		Porch	10 x 12	Tarpaper							
13	R. Cockney	3	16 x 28	Log	Good	Oil	1961		NANR	3	
14	Empty	3	16 x 28	Log	Good	Oil	1961		NANR		
15	J. Komeak	1	12 x 14	Scrap	Poor	Wood	1956	Esk.	occup.	2	4
		Porch	8 x 8	Scrap							
16	D. Pingo	2	16 x 20	Log	Fair	Wood	1958	Esk.	occup.	3	7
		Porch	16 x 20	Log							
17	Empty	1	14 x 16	Log	Fair	Wood	1958		NANR		
		Porch	8 x 8	Lumber							
18	F. Kimiksana	1	14 x 16	Log	Poor	Wood	1958		NANR	4	7
		Porch	8 x 8	Lumber							

APPENDIX A (cont.)

House No.	Occupant	No. of Rooms	Size	Construction Material	Condition	Fuel	Year Built	Builder	Owner	Adults	Children
19	E. Felix	4	16 x 32	Frame	Good	Oil	1958		NANR	3	7
20	R. Pokiak	3	16 x 24	Frame & Plywood	Good	Wood	1957	Esk	occup.	3	3
21	A. Voudras	2	12 x 20	Log	Fair	Wood	1960	Esk.	occup.	2	4
22	John Raddi	Porch	6 x 8	Plywood							
		3	12 x 28	Log	Fair	Wood	1948	Esk.	occup.	2	3
23	A. Felix	Porch	7 x 7	Log							
		2	16 x 18	Log	Fair	Wood		Esk.	occup.	2	5
24	B. Pokiak	Porch	6 x 10	Plywood							
		3	18 x 24	Log	Fair	Wood	1950	Esk.	occup.	4	12
25	Empty	Porch	18 x 10	Log							
		4	20 x 24	Frame	Good		1959	Esk.	A. Carpenter		
26	R. Kowichuck	Porch	20 x 8	Plywood							
		3	16 x 20	Log	Fair	Wood	1955	Esk.	occup.	4	5
27	Annie Loreen	Porch	6 x 16	Scrap							
		2	12 x 24	Log	Good	Oil	1961		NANR	1	2
28	Mary Gruben	2	12 x 24	Log	Good	Oil	1961		NANR	2	1
29	Empty	1	10 x 12	Log	Poor			Esk.	NANR		
30	F. Feichtinger	2	12 x 24	Frame	Good	Oil	1961		NRCL	1	
31	Empty	Porch	4 x 12	& Plywood							
		1	14 x 18	Log	Poor			Esk.	M. Gruben		
32	W. Gruben	1	14 x 16	Log	Fair	Wood	1955	Esk.	occup.	2	5
33	C. Gruben	Porch	8 x 14	Log							
		2	16 x 24	Lumber	Fair	Wood	1951	Esk.	occup.	6	8
34	Empty	Porch	4 x 8	& Plywood							
		1	12 x 16	Log	Fair	Wood		Esk.	S. Kikoak		
35	E. Kikoak	Porch	8 x 8	Scrap							
		1	14 x 16	Log	Poor	Wood	1952	Esk.	occup.	5	2
36	F. Nuyaviak	Porch	14 x 8	Scrap							
37	J. Elias	1	18 x 18	Log	Fair	Wood	1948	Esk.	occup.	3	1
		1	13 x 15	Plywood	Fair	Wood		Esk.	occup.	2	
38	P. Raymond	Porch	5 x 8	Plywood							
		1	12 x 14	Log	Poor	Wood	1941	Esk.	occup.	3	6
39	F. Cockney	Porch	8 x 14								
		3	16 x 20	Log	Good	Wood	1960	NANR	occup.	4	1
		Porch	8 x 16	Plywood							

APPENDIX A (cont.)

40	Empty	1 Porch	14 x 18 8 x 8	Log Plywood	Fair	Wood	Esk.	W. Dillon	
41	M. Amos	1 Porch	14 x 16 8 x 8	Frame Scrap	Fair	Wood	1956	A. Elias	2 1
42	J. Jacobson	1	14 x 18	Log	Fair	Wood	Esk.	occup.	2 7
43	A. Cockney	2 Porch	12 x 26 9 x 12	Log Lumber	Fair	Wood	1950	occup.	2 3
44	O. Klengenber	1	16 x 20	Log	Fair	Wood	1959	occup.	6 9
45	E. Gruben	2 Porch	16 x 20 10 x 16	Log Plywood	Fair	Oil & Wood	1950	occup.	4 5
		Garage	12 x 24	Canvas & Plywood					
46	E. Elias	1 Porch	12 x 16 8 x 12	Frame Lumber	Fair	Wood	1950	occup.	5 6
47	L. Nunatuma	2	12 x 18	Log	Fair	Wood	1955	occup.	1 1
48	A. Enaghok	2 Porch	12 x 26 8 x 10	Scrap Plywood	Fair	Wood	1960	occup.	2 5
				Material					
49	G. Anaviak	1	12 x 16	Log	Good	Wood	1962	occup.	1
50	W.S. Katigagyok	1 Porch	16 x 18 5 x 10	Log Plywood & Lumber	Fair	Wood	1962	occup.	2 5
51	O. Anivi	1	12 x 14	Log	Fair	Wood	1962	occup.	2 4
52	K. Ovayuak	1 Porch	14 x 16 7 x 9	Log Scrap	Fair	Wood	1954	occup.	4 7
53	D. Andreason	1	12 x 24	Frame & Canvas	Poor	Wood	Esk.	occup.	4 2
54	Norman Felix	2 Porch	4 x 7 14 x 32	Scrap Log	Fair	Wood	1961	occup.	2 4
55	J. Nasugaluak	4 Porch	15 x 31 8 x 10	Log Log	Good	Wood	1957/61	occup.	4 7
56	J. Felix	1	16 x 20	Log	Fair	Wood	1961	occup.	2 3
57	R. Katigagyok	1 Porch	12 x 17 5 x 8	Log Plywood	Fair	Wood	1961	occup.	3 2
58	P. Adam	1 Porch	15 x 21 5 x 8	Log Plywood	Poor	Wood	1951	occup.	2 6

APPENDIX A (cont.)

House No.	Occupant	No. of Rooms	Size	Construction Material	Condition	Fuel	Year Built	Builder	Owner	Adults	Children
59	E. Katigagyok	1	12 x 14	Scrap Material	Poor	Wood	1961	Esk.	occup.	3	
60	H. Amagonolak	1	12 x 14	Tent	Poor	Wood			occup.	3	2
61	J. Avec	1	12 x 18	Lumber & Canvas	Poor	Oil & Wood		Esk.	occup.	3	1
62	B. Panaktolak	1	12 x 16	Lumber & Canvas	Poor	Oil & Wood		Esk.	occup.	5	6
63	J. Tedjuk	1	8 x 10	Tent	Fair	Wood		Esk.	occup.	2	1
64	J. Kotokak	1	8 x 10	Log	Fair	Wood		Esk.	occup.	1	

Note: Houses No. 21, 22 and 23 and 24 are being demolished to make way for a new school building.

The Department is building a 16 x 18 log house for the owners of 21, 22 and 23, and 2 20 x 32 for the owner of house 24.

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NAME	SIZE	CONSTRUCTION MATERIALS	CONDITION	PORCH	OCCUPANTS	
					Adu.	Children Total
Moses Anaoyok	16 x 14	scrap	poor	x	3	1 4
Abraham Carpenter	12 x 16	scrap	poor	x	2	3 5
Jessie Green	8 x 10	tent — summer stay with Garrett Ruben in winter.			1	0 1
Guy Hologak	12 x 14	scrap	poor		1	0 1
Joe Roy Illasiak	12 x 14	scrap	fair	x	2	3 5
Andrew Kringnatak		shares with Moses Anaoyok				
Donald Kuptana		DEW Line	good	x	2	3 5
Eric Lester		tent			2	3 5
Herbert Nakemayok	16 x 18	Frame & canvas	poor	x	5	1 6
Alphonse Ohoilak	12 x 14	Frame & canvas	poor		3	2 5
Eddy Ruben		DEW Line	good	x	4	5 9
Garett Ruben	16 x 20	scrap	poor	x	4	3 7
Billy Ruben	16 x 16	canvas & plywood	poor	x	3	9 12
John Ruben	12 x 16	scrap	poor		4	2 6
Marcus Ruben	10 x 12	frame tent	poor		3	1 4
Frank Wolki	10 x 12	frame tent	poor		2	4 6

APPENDIX B
Cape Parry Eskimo Population¹
VITAL STATISTICS 1952 - 1961

YEAR	CAUSE OF DEATH													Stillborn or Premature	Total Death	Birth	Increment				
	Tuberculosis			Pneumonia			Malnutrition			Old Age & unknown			Other					Child- birth			
	I	C	A	I	C	A	I	C	A	I	C	A	I						C	A	
1952																	1	1	4	+ 3	
1953										1	1						1		3	2	- 1
1954																			-	1	+ 1
1955						1	1					1				1			4	5	+ 1
1956					1	2										1			4	3	- 1
1957						1													1	4	- 3
1958	1																		1	4	+ 3
1959																			-	7	+ 7
1960																	1		1	11	+10
1961																			4	6	+ 2
TOTALS																		19	47	+28	

I - infant
C - child
A - adult

1. Includes settlements of Letty Harbour, Paulatuk, and small camps on the Cape Parry peninsula.
Source: Registrar of Vital Statistics, N.W.T.

APPENDIX C
SOME COMPARATIVE RETAIL PRICES 1962

	Ottawa	Tuktoyaktuk	Cape Parry
Fuel Oil, per gal.	.19	.65	—
Kerosene, per gal.	.30	1.00	1.45
ACTO gas, per gal.	.39	.75	1.20
Leaded gas, per gal.	.40	.55	—
.30 - 30 cartridges, 20 pkg.	3.25	4.30	4.40
.22 Calibre ammunition, 500 rounds	8.00	11.50	9.50
Duffel cloth, per yard	—	8.50	9.50
Cigaretts, per pkg of 20	.37	.38	.40
8 oz. tin, Players Fine Cut	1.60	1.80	1.90
Flour, per 100 lbs.	9.20	13.00	15.20
White sugar, per 5 lbs.	.46	.85	1.10
Tea, per 3/4 lb.	1.34	1.55	1.70
Coffee, per lb.	.77	.95	1.00
Carnation Milk, large tin	.16	.24	.24
Powdered Milk, per lb.	.39	.80	.98
Canned Butter	.71	.85	1.15
Lard, par lb.	.25	.28	.30
Chocolate Bars, each	.10	.10	.12
Canned Tomatoes, 20 ozs.	.27	.33	.45
Strawberry Jam, 2 lbs.	.72	.65	1.00

APPENDIX D

DEW LINE EQUIPMENT HIRE RATES

Bombardier	\$9.00 per hour
Light Truck	6.00
Heavy Truck	8.00 - 12.00
Norwest	25.20
D 4	14.50
D 8	34.00
Winch additional	2.50
Bulldozer Blade additional	6.00

5 Hour Minimum charge on all equipment.

APPENDIX E

Table No. 1

Unit Tree Volumes in Cubic Feet and Board Feet

Tree DBH	Heights in Feet of Anderson R Trees from	Heights from Nova Scotia Composite Volume Tables		Nova Scotia Composite Tables				Interpolated Anderson R Values Used in Compilation	
	Free-hand	Site	Site	Site IV		Site V		Cubic Feet	Board Feet
	Curves	IV	V	Cubic Feet	Board Feet	Cubic Feet	Board Feet		
4	26.5	29.0	23.5	.9		.7		.8	
6	34.5	37.0	29.5	2.9	6	2.4	4	2.7	5
8	41.0	45.0	35.5	6.6	22	5.4	17	6.1	20
10	46.0	51.0	41.0	11.6	51	9.4	40	10.5	80
12	51.0	57.0	46.0	18.2	90	14.9	70	16.4	80
14	56.0	61.0	50.0	26.4	138	21.6	105	24.2	123

Table No. 2 – Number of Trees and
Volume per Acre for the Sixteen
Measured Field Plots

Plot No.	Number of Trees per Acre by Diameter Classes						Volume per Acre	
	4"	7"	8"	10"	12"	14"	Cubic Feet	Board Feet
1	42	34	17	14	2		409	1,300
2	40	22	7	1			145	295
3	21	12	10	2			131	350
4	61	46	12	1	1		273	595
5	15	9					36	45
6	14	27	9	1			149	360
7	8	10	4	3	1		106	345
8	84	52	18	6			380	890
9	48	28	22	2			269	670
10	48	24	26	2			283	730
11	40	18	7	3			155	365
12	55	20	5	2			149	290
13	25	17	33	20	11	1	682	2,648
14	39	26	19	19	4		482	1,685
15	64	36	20	2			291	670
16	34	30	16	2			227	560
Total	638	411	225	80	19	1	4,167	11,238
Mean Value Per Acre	39.9	25.7	14.1	5.0	1.2	.1	260	702

